



JULY 2026

THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

Help wanted: Our club needs chair for Program Working Group

Aloha, all:

The Program Working Group needs a chairperson to oversee it. This involves scheduling presentations at the monthly meetings. We need a qualified person to assume this position who has the time to oversee it. We are floundering right now with a lack of talent. So if you have some spare time and are interested, please notify Thomas Avila, KH6GG, our President.

*Jim Tatar, WH6EMN,
BIARC secretary*

**The Hawaii County
Emergency Operations
Center now has its own
FCC call sign.
It is WH7EOC.**



KH6GG, KH6KU AND KH6DLK.

Photos by KH6GG and KB6EGA

Field Day a hit at Wailoa Park



KH6KU

A couple dozen area hams turned out and tuned up at Wailoa State Park for the annual BIARC Field Day on Saturday, June 27.

The overall theme this year was "Amateur Radio: A National Resource."

"Combined with the ARRL Year of the Club and America's 250th anniversary, provides the perfect opportunity for radio clubs to set up stations in public places and demonstrate amateur radio's value through science, skill, and service to their communities and our nation," said ARRL officials.

Post-event reports indicated a good time was had by all.

President Thomas Avila, KH6GG, gave an equipment update:

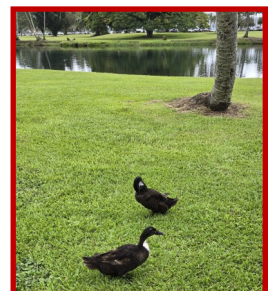
"Roy (KH6KU) brought his Yaesu FT-710 and a couple of antennas we fiddled with before Roy and Gary (WH6EPS) put up Roy's 80m endfed.



**WH6GRW,
KH6KU,
NH7PE.**

"I brought the club equipment, but the new bracket for the ATAS antenna is missing and I couldn't mount it to the tripod. I'll probably make one now that I fixed my welder.

"The ATAS needs some radials, so it tunes all the bands it's advertised as doing, so it'll be good to have that buttoned up."



Continued from Page 1

More Field Day photos



Do It Yourself Success Story

Homemade stealth antenna is a success in home-owners' association-governed suburban neighborhood.

Check it out in article from The ARRL Letter on Page 6.

Monthly ham breakfast

The informal multi-club First Saturday of the Month Breakfast gathering is an East Hawaii tradition. Over the years, interested hams have met at varying venues on that first Saturday.

There's no formal agenda, and everyone is welcome. The current setup is at 7:30 a.m. at IHOP restaurant in Hilo.

One of the regulars for many years, Rick Gardner, WH6LU, has put out a call for increased participation: "It's a great opportunity for hams to get an idea what's going on locally," he noted.

Volcano comms volunteers needed for July 25 races

Thanks again to all of you who helped out with radio communications at last year's 2025 Volcano's 'Ohi'a Lehua Runs. We have been asked again to provide communications coverage for this year's event.

Here are the particulars:

Date: Saturday, July 25, 2026

Location: Volcano Village

Start/Finish area: Volcano School of Arts & Sciences (VSAS) - Old Volcano Road Campus

Radio Operator Report Time: 6:15 a.m. at the NCS located at VSAS Start/Finish line.

Race start times: Half Marathon - 7:00 a.m.; 5K 7:15 a.m. (4 hour cutoff - race ends at 11:00 a.m.)

Frequency: 147.260 MHz; pl. 103.5 Hz on the input (transmit) only; Alt. (442.150 MHz; pl. 100 Hz.)

Please let me know if you can participate as a radio operator in this year's race. Also, please provide me your shirt size ASAP. Shirt orders will be submitted shortly.

This is a great opportunity for us to practice our radio skills and participate in a needed community service. I hope you can join us! Mahalo!

73 & Aloha
Doug Wilson
KH7DQ
Ph. 985-9362

BIARC Treasurers Report 05/31/2026

	Amount
Beginning Balance 5/1/26	\$6,216
BOH Deposit	\$50.00
BOH Withdrawals	\$0.00
PayPal Deposit	\$0.00
Paypal Withdrawals	\$83.88
Paypal Fees	\$0.00
Total Funds \$	6,182.55
BOH Balance 5/31/26	\$4,496.22
PayPal Balance 5/31/26	\$1,686.33
Total \$	6,182.55
Difference	0.00

Watch Salty Walt's Portable Antenna Forum

You can now watch a featured presentation from 2026 Dayton Hamvention®, Salty Walt's Portable Antenna Forum, on ARRL's [YouTube channel](#). In the session, Walt Hudson, K4OGO, demonstrates how hams can build antennas from inexpensive materials and get on the air from parks, beaches, summits, and other portable operating locations.

In the 25-minute video, Hudson goes beyond construction details to explore the larger idea that antennas are tools for exploring propagation. He discusses how antenna design, takeoff angle, ground conditions, and operating location can dramatically affect results, and he encourages operators to experiment rather than rely on a single "one-size-fits-all" antenna.

Drawing on his ARRL books, *Salty Walt's Portable Antenna Sketchbook* and *Salty Walt's NEXT LEVEL Portable Antenna Sketchbook*, Hudson shares practical, field-tested, ideas for building portable antennas that are simple, affordable, and effective. Whether you're new to portable operating or looking for fresh ideas for POTA, beach operations, or DX chasing, the presentation is packed with practical insights and real-world examples.

Watch the video now at youtu.be/7dXyaEV8ajU.

Thanks to [Hamvention](#) for supporting this ARRL-sponsored forum.

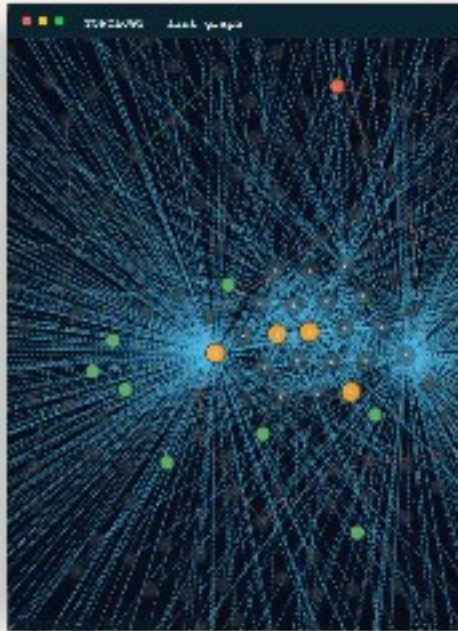
WHAT YOU ACTUALLY SEE

LINK DEMO

Bridging the gap between Meshtastic and Reticulum



Precision - best heard - sparse network - SNR - across every island



Who hears whom — the mesh's own shape, link by link



Link targets & terrain road — plus a terminal TNC for operators who live in SNR

66 / 11

At the June 14 BIARC gathering, Shawn Farley, WH6GXZ, presented a program on bridging the gap between Meshtastic and Reticulum. Reticulum is the cryptography-based networking stack for building local and wide-area networks with readily available hardware. Reticulum can continue to operate even in adverse conditions with very high latency and extremely low bandwidth.

The vision of Reticulum is to allow anyone to operate their own sovereign communication networks, and to make it cheap and easy to cover vast areas with a myriad of independent, interconnectable and autonomous networks. Reticulum is Unstoppable Networks for The People.

OPEN SOURCE & THE ECOSYSTEM

Off-grid comms you can't inspect is comms you can't trust.

0.6.2

meshtastic / beta - rc1 - 2024-06-10

6,079

active nodes (4,000)

200

nodes / day

0.1.0

meshtastic / alpha - rc1 - 2024-06-10

Four weeks ago at 212C: 134 files / 3,830 tests - Today: 200 / 6,079 - the test count nearly doubled, that delta is the "actively field hardened" number.

MeshForge

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

cloud data - 800 nodes

TRY IT

Got a Pi and a LoRa radio? You're 10 minutes from this map.

THE MAC

```
sudo python3 src/launcher_lui/main.py
```

NO TOOLS - ZERO DEPENDENCIES

```
python3 src/standalone.py
```

It auto-detects your setup — or pick a deployment profile. Bring your nodes.



github.com/Nursedude/meshforge

when → clone → key up

DUDE-CLAW — THE EDGE

Three radios. One tiny ESP32.



LoRa
RX + TX — the mesh long-haul.



WiFi
Link-up to a Pi-brain or the field LAN.



BLE
Passive scan — sensing, not pairing.

The sensing **tip** of the fleet — deploy where a Pi won't fit or survive. Pair it with a Pi-brain (even a handheld) and you've got a fully portable, standalone NOC. Built lean & fail-toud.

```
dudeclaw-01 N*
!7f3a1c8d -52
31C 82k up 14m
mesh:1176 fed:3/4
wd:1 SIG 20:45
```

dude-claw - first light

Heltec V4 OLED - painted over SNR by the fleet - 2024-06-11 20:45 HST

See Page 9 for Jonah Aragon's online article on: "I'm Getting into Mesh Networks: Meshtastic, MeshCore and Reticulum.")

BIARC

Education & Outreach Committee Report – June 2026

Activity

May 13 - Keonepoko Elementary School Science Night – end of school year activities.

June 1 – Siren Test Net participation.

June 14 – BIARC Exec and Member meetings.

June 17 – VOAD Combined Committee Meetings

June 29 – Pahoa HS Comm Team formation in concert with Civil Defense

Scheduled Activity

July 1 – Siren Test Net participation.

July 30 – Keaau Community Center Science Night from 5:00 PM to 7:00 PM

Aug 18 – Keaau Elementary Science Night from 4:30 PM to 6:00 PM

Sept 9 - EB de Silva Elementary Science Night from 5:00 PM to 7:00 PM

Sept 30 - Waiakea Elementary Science Night from 5:00 PM to 6:30 PM

Planned

Further educational elements re ham radio via Video Presentation

Further refine the Photo Release for Minors at BIARC E&OC supported events.

Continue to work with the Museum of Science and Technology agenda (see above) through 2026 and 2027 and to solicit participation at Emergency Prep and Readiness events in Puna.

Integrate BIARC PC material and enrich EOC presentations.

BIARC Education and Outreach Committee

Leigh Critchlow WH6LC, Fred Fischer WH6HAA, Jim Tatar WH6EMN,

Mark Watanabe WH6FSA, Les Hittner K0BAD, Mark Kaponi WH6HEO

Thanks to all members and participants. David Miller KH6CZ

Navigating an HOA and Returning to Amateur Radio and Field Day!

Fred Johnson, K6FRD, is an amateur radio operator in Riverside, California. Like many hams, he lives in an HOA-controlled neighborhood. For Johnson, finding practical, low-visibility, antenna solutions has become part of the fun over the years.

"For years I struggled to enjoy HF because, like many amateurs in an HOA, towers and conventional outdoor antennas simply aren't an option," said Johnson. "I tried several radios over the years, but without an effective antenna I rarely heard much activity and had very limited success making contacts. A few weeks ago, I decided to stop chasing radios and instead focus on building the best stealth antenna I could."

Johnson said that after returning to HF last year, he enjoyed experimenting with antennas, portable operating, FT8, and station design to see what's possible from a suburban backyard.

"The result is a simple 145-foot horizontal loop made from 14 AWG THHN wire, mounted on stainless cup hooks around the top of my backyard fences about six feet above the ground. The wire is insulated from the hooks with short pieces of clear vinyl tubing and is fed with a 4:1 current balun and approximately 25 feet of RG-8X coax. I also added ferrite chokes at both the antenna and radio ends of the feed line to help minimize common-mode current and noise."

"The results have honestly exceeded my expectations," he said. "My noise floor is typically only S1 to S2, allowing me to hear stations I would have completely missed before."

ARRL Field Day 2026 gave Johnson a chance to operate entirely on battery power using his IC-7300 and his new antenna, making contacts on 10, 15, and 20 meters. Since installing the loop, he has worked 39 states, 24 countries, and stations throughout Japan, Hawaii, Samoa, Puerto Rico, the U.S. Virgin Islands, South America, and across North America—all from his HOA backyard!

Johnson went on to say he hopes that sharing his successes, and the occasional lessons learned along the way, encourages other operators, especially those with HOA restrictions, to get on the air and enjoy this amazing hobby.

Johnson has created a Google photo album with all of the photos of his antenna design:

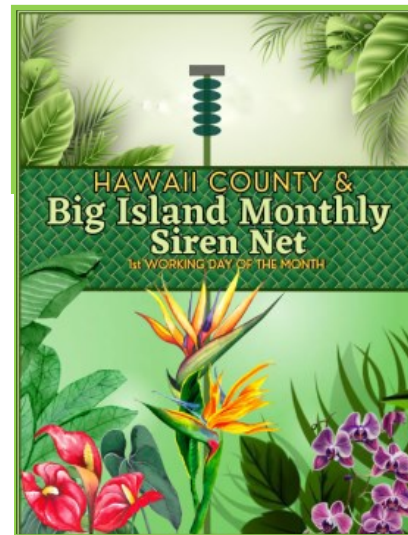
photos.app.goo.gl/qeF1eToA4q7cAJ5PA

Editor's note: Thanks to Fred Johnson, K6FRD, for sharing his story, his HOA-proof antenna, and his effort to return to amateur radio and Field Day!

The Hawaii County Siren Report for July 2026

From Darrell Asuka, KH6RDO, for the Big Island ARES Group

Location	Observer	Mode	Status	Notes
NOT WORKING				
HA112 Kolekole	KH6RDO	Allstar	Not Working	
HA806 HOVE Shopping Center #2	KH7MS	DMR	Not Working	car accident
HA916 Kehana Beach	KH6AQ	Email	Not Working	
WORKING				
HA101 Leleiwi	KI6HBZ	Allstar	Working	
HA102 Baker Avenue	WH6FDE	Email	Working	
HA103 Onekahakaha	WH6FDE	Email	Working	
HA104 Banyan Dr	KH6ATU	Allstar	Working	
HA108 Iiwipolena Rd Kaumana	KH7BR	Email	Working	
HA111 Honomu	KH6RDO	Allstar	Working	
HA113 Hakalau	KH6RDO	Allstar	Working	
HA114 Carvalho Park	NH6WT	DMR	Working	
HA115 Paukaa	AH6JA	Email	Working	
HA116 State Building	WH6FDE	Email	Working	
HA117 Ainako Park	WH6FSA	Allstar	Working	
HA120 Mohouli Park	WH6GNK	Email	Working	
HA123 Waikaumalo Park Ninole	WH6FIQ	Allstar	Working	
HA125 Kaumana School	KH7BR	Email	Working	
HA201 Laupahoehoe Lookout	WH6FSE	Allstar	Working	
HA202 Laupheohoe Point	WH6FSI	Allstar	Working	
HA301 Paaui	AH6JA	Email	Working	
HA304 Ookala	WH6GDC	Allstar	Working	
HA503 Kamehameha Park Kohala	WH7WZ	Text	Working	
HA601 Palani / Kuakini Kona	KH6ICU	DMR	Working	
HA609 Old Kona Airport	KH7MS	DMR	Working	
HA611 NELHA Kona	WH6GTD	Text	Working	
HA702 Captain Cook	WH6WF	Text	Working	
HA801 Naalehu	WH6HC	DMR	Working	
HA804 Pahala	WH7BR	Allstar	Working	
HA805 HOVE Community Center Leilar	KH7MS	DMR	Working	
HA807 Waiohinu Park Naalehu	KH6HA	DMR	Working	
HA809 HOVE Reef Blvd #3	WH6FC	DMR	Working	
HA901 Mountain View	WH6LC	Email	Working	
HA907 Hawn Beaches Park #1	KH7LM	Text	Working	
HA911 Hawn Beaches #2 Wela St	KH7LM	Text	Working	
HA606 Keauhou Kona	WB7N	Text	Working	
HA805 HOVE Community Center Leilar	WH6HDG	DMR	Working	
HA104 Banyan Dr	WH6FDE	Email	Working	





Grid Madness set for Sunday, Sept. 27

Hippo Dude

*2026 Grid
Madness
mascot*

Mark your calendars:

The date is set for this year's Grid Madness.

The popular fall event will be held on Sunday, Sept. 27, from 1300 until 1700 HST.

This date was picked especially not to conflict with the Ka'u Coffee Trail Run, which draws a big group of ham volunteers helping with communications for the races. The Ka'u event will be staged on the previous Sunday.

As details are firmed up, info specific to the 2026 Grid Madness event will be provided at <https://gridmadness.blogspot.com/>

For now, interested hams can check that site for details of last year's event and get an overall feel for the contest, since general information doesn't change much from year to year.

Grid Madness is a statewide event, and last year Hawaii Island hams were joined by folks on Kauai, Maui and Oahu. There was lots of relaying going on and plenty of comments about how much fun everyone had.

The contest is open to licensees at all levels and is on simplex only.

The four-hour event is designed for EMCOMM practice, and for FUN.

Test your equipment, coverage and operating skills using FM simplex on 6 meters, 2 meters, 1.25 meters and 70 cm.

I'm Getting Into Mesh Networks... (Meshtastic, MeshCore, and Reticulum)



Jonah Aragon

Jan 26, 2026 — 15 min read

www.jonaharagon.com

To be perfectly upfront with you, this post will be glossing over many Meshtastic and MeshCore features, because I feel they are both non-serious solutions compared to Reticulum for reasons I will explain later on in this post. I can almost guarantee I have been running Meshtastic and MeshCore for longer and with more infrastructure than you, and in fact I still do, despite not really believing in their long-term success, so... Any omissions or "lack of problem solving" in this post are not due to a lack of knowledge, but simply because *fully* detailing the many problems they have is outside the scope of this article.

I love networking, a lot. So much so that I've run my own ISP since 2024, complete with its own ASN, IPv4/6 address space, fiber optics, etc.

However, do this and you quickly realize how reliant you still remain on central service providers. The internet is a mesh, but the real players on that mesh are few, far between, and easy to coerce into censorship and other bad things. Even after ascending to the lofty realms of direct BGP peering myself, my access to those resources is locked behind yearly fees from ARIN. Ownership of the "real estate" of the internet, IP addresses, no longer exists.

The tragedy of modern computing is that the local compute we own in our offices, on our laps, or in the palm of our hands is massively, massively powerful, but Big Tech companies actively refuse to take advantage of that fact. Why are you, I, and our neighbors largely relegated to consuming access from big players when the computers we have are capable of so much more?

Mesh networking, sending packets of data through many directly interconnected peers instead of through central datacenters, promises to free us from our reliance on central service providers, and it's something I've been really excited about lately.

Of course, there is good reason for how the internet is currently designed. High bandwidth connections are costly, and for some applications lowering latency as much as possible is very important, which realistically requires continent- and ocean-spanning fiber optics with as few middle-men as possible.

This doesn't mean we need to put all our eggs in this basket though. While bandwidth-intensive services like Netflix or latency-sensitive services like gaming are not likely to come to mesh networks anytime soon, there are a vast number of applications which are perfectly suited to mesh networking:

Messaging, social networking, and general information sharing are very practical uses for mesh networking where access, censorship resistance, and resiliency are increasingly critical for many people around the world.

For applications like this, we don't need to trench fiber connections through the ground to get everyone connected. In the modern mesh networking space, much of the innovation is happening in the LoRa radio space.

LoRa radios use license-free, sub-gigahertz radio bands that are available for public use in nearly all countries around the world. Compared to the license-free 2.4 GHz or 5 GHz radio you'd recognize from Wi-Fi (but is also used by many other technologies), LoRa operates at much lower power and, importantly and simultaneously, at much longer range.

Mesh networking over the airwaves pre-

sents a very unique opportunity for our societies. We could build a resilient, peer-to-peer network that coexists with the internet, enabling connectivity in currently underserved regions and increasing our personal sovereignty online by maintaining a functional backup to the internet for our most critical needs.

It's also just a freeing feeling to be able to send a message to someone else relying only on devices that you and people in your network own outright, instead of renting the capability to do so from your local ISP or Elon Musk's Starlink.

Meshtastic

The obvious frontrunner in the mesh networking space is Meshtastic, mostly because they were the first in the consumer LoRa mesh space, or at the very least the first to do it pretty well.

It's easy to see why Meshtastic has quite a bit of popularity: it's a real product designed with a specific use-case in mind (mobile messaging and device tracking, primarily), not a technical project just trying to build a network and hoping the use-case comes later.

This is very appealing for most people who just want something they can buy and use out of the box, like a set of walkie-talkies from Wal-Mart. Unfortunately, much like those cheap walkie-talkies in comparison to more serious technology like amateur radio, Meshtastic's core design holds the platform back from achieving its full potential.

Meshtastic's first-mover advantage is pretty hard to overcome, especially when it already works reasonably well for small, private groups like hikers or event-goers.

For a very large and public mesh, however, it's become clear to most people that Meshtastic by design is a fairly untenable solution. Some public mesh groups have increased the bandwidth available to Meshtastic by giving up some range, but it's a stop-gap solution that doesn't fix the problems Meshtastic has in this environment at the end of the day.

I think most people who are serious about public mesh networking have moved on to researching other solutions, or will have to soon.

MeshCore

MeshCore is one of these potential solutions some public mesh groups have begun switching to.

While Meshtastic's original design essentially floods the network with every message being sent, hoping it eventually reaches the correct destination, MeshCore has an actual routing system that can send messages only through a path of specific devices on the mesh that include the sender and recipient.

This results in a monumental reduction in

radio transmissions, the advantages of which can't be understated. It makes the network less congested and more reliable, and for people who are mainly interested in messaging as opposed to sharing sensor/location data that Meshtastic remains well-suited for, it's no surprise that many larger groups have begun to shift to MeshCore.

Unfortunately, MeshCore is not a true mesh in the way public mesh enthusiasts would probably like it to be. At a very high level, devices in MeshCore are broken up into two categories: companions and repeaters.

Companion devices would be what most people use to send and receive messages, while repeaters are the devices which actually mesh with each other and extend the overall network's range. What this means is that a companion always has to be in range of a repeater to access the network, companions never relay messages between themselves on behalf of other companions.

There are advantages to this approach. MeshCore allows messages to traverse up to 64 hops away, which is an enormous real-world scale when LoRa repeaters can be many miles apart in ideal conditions. Even in the best possible case, Meshtastic's default 3-hop limit (albeit configurable up to 7) places a real limit on how far messages can spread.

It's very true that anyone can participate in MeshCore as a repeater, so all the tools to build your own mesh are certainly there. It's just that it requires some additional planning, coordination, and centralization that I don't view as totally necessary.

The bigger problem I have with MeshCore is that many parts of it are proprietary. While the underlying protocol and the firmware for some radios is open source, all of the official MeshCore clients are proprietary, and even have features paywalled.

Proprietary software is simply not disaster-ready, and that goes doubly so for software reliant on central payment processors.

I am not the type of person who needs to use open-source software 100% of the time by any means (although it'd be nice), but the only point in my mind of having an off-grid mesh network in the first place is total freedom and control, so in this particular case I simply cannot ever support a closed-source solution.

Efforts are already being made to create unofficial open source clients for MeshCore. I won't discount this fact, but at the end of the day most people in the MeshCore ecosystem will be in the official, proprietary ecosystem, and I don't think MeshCore has enough advantages, users, or reliability to warrant adopting at this very early stage of mesh networking.

We have a unique opportunity as enthusiasts to adopt the best mesh networking solution we can, before the "network effect" truly sets in and locks people in place to a particu-

Continued from previous page

lar platform. I think we can do better than Meshtastic and MeshCore.

Problems

Unfortunately, both Meshtastic and MeshCore are highly limited, and don't scale well. Meshtastic barely can scale to a regional mesh in ideal scenarios, and while MeshCore fares better here, it's still unlikely to scale to the size of many larger regions, much less countries or planets.

The thing is, Meshtastic and MeshCore are both more applications than they are protocols. They enable simple instant messaging communication over LoRa, but they don't give much thought to mesh networking applications beyond what their client apps officially support.

They're geared towards communicating with a small, local group, and any public meshes on these networks are really exceptions rather than the standard use-case.

Another problem is that Meshtastic and MeshCore both rely on LoRa pretty much exclusively.

LoRa is very cool for building ad-hoc, low-bandwidth mesh networks, and it's a blessing that we have it available in most countries as an unlicensed option we can operate on without a ham radio license, and with modern digital technologies like encryption that are mostly forbidden on amateur radio.

It's hardly the perfect solution for many scenarios though, and it is quite slow.

In a perfect world, the mesh networking/routing software would be completely independent of the physical network that connects all these devices together.

For example, I want to be able to build cheap, local LoRa networks in neighborhoods and other regional communities, and interconnect them with more powerful point-to-point microwave connections, or even fiber or the internet.

Meshtastic (and I believe MeshCore via some unofficial "gateways") have some hacky methods of interconnecting different meshes with MQTT, but the experience is quite poor and it's clear that this type of connectivity is not a first-class experience on the network. Especially on Meshtastic, bridging to the internet with MQTT can degrade the network so much that it becomes impractical to use among any more than a handful of people.

It should be possible to build a mesh routing solution that intelligently routes packets between nodes over many different types of connections, completely seamlessly so that the experience of using the mesh never changes based on your specific interface.

Luckily for us, this has already been done!

Reticulum

Reticulum is extremely cool.

It's a networking stack that intelligently provides strongly-encrypted routing over a wide variety of physical networks, including LoRa. Like MeshCore, it has automatic routing over paths on the network, but unlike MeshCore, those paths can traverse not only over LoRa but over any supported interface.

Additionally, like Meshtastic, Reticulum essentially works out of the box with devices operating on the same local network. Connect two devices on the same LoRa frequency and you have a functional mesh right away, with no advanced networking skills or dedicated repeaters required.

This makes Reticulum very well suited both for small, private networks like Meshtastic, and for very large networks that MeshCore



tends to work better with, likely going beyond MeshCore's capabilities with promises of planetary-level scalability.

The best part is that you can easily start small with Reticulum and everything will work perfectly fine, but once a member of your small network interconnects with a different Reticulum network simultaneously, the networks can seamlessly combine, enabling complete interoperability without the need to fiddle with settings or all agree on some common radio protocol as in Meshtastic-land.

You can mix-and-match Reticulum connections over LoRa radio, your local LAN network, point-to-point Wi-Fi or microwave connections, the internet, Tor or I2P, and even over networks like packet radio for the ham enthusiasts out there.

Many Networks

Essentially, Reticulum can theoretically support any network you can interact with via TCP, UDP, or just a simple serial interface. It takes the bandwidth of all the networks you connect to into account when determining the best paths for messages to traverse, optimizing both for distance and to use the resources of each physical network efficiently.

Heterogeneous connectivity is Reticulum's bread and butter, basically. The project's documentation probably says it best:

In conventional networking, mixing different transport mediums typically requires gateways, translation layers, and careful configuration. A WiFi network doesn't natively interoperate with a packet radio network without additional infrastructure, and you can't just download a car over a serial port, or send an encrypted message in a QR code. Reticulum treats heterogeneity as a core premise. The protocol is designed to seamlessly mix mediums with vastly different characteristics [...]

For network designers, this means you are free to use whatever mediums are available, affordable, or appropriate for your situation. You might use LoRa for wide-area low-bandwidth coverage, WiFi for local high-capacity links, I2P for anonymous Internet connectivity, and Ethernet for infrastructure backhauls, all within the same network. Reticulum handles the translation and coordination automatically.

While I don't think homegrown mesh networks should be reliant on the internet or I2P in the long run, I think first-class support for connectivity over TCP and other internet

protocols is still a significant advantage for people striving to build local, public mesh networks.

Interconnected Local Meshes

Distinct local groups being able to interconnect is a huge boon for content availability on the network, and the beauty is that all these network links in Reticulum automatically become redundant as more connections are made.

A local mesh in Minneapolis could interconnect with a local mesh in Chicago over the internet, for example, but perhaps in the future some dedicated network operators are also able to establish a direct connection via microwave or LoRa between those cities. Connections may normally continue to traverse the internet at higher speeds, but in the event of an outage those alternate/ad-hoc paths can take over seamlessly, because they're all just paths on the same, single Reticulum network.

In the worst case scenario, a local Reticulum mesh lacking any connections to other Reticulum networks is going to fall back to only regional content availability, which is still the most that you'll realistically get from Meshtastic and MeshCore.

Perhaps just as importantly, Reticulum enables connectivity across borders. LoRa has a bit of a problem, which is that it operates on different frequencies in different jurisdictions. While LoRa operates on 915 MHz at up to 1 watt of power in the United States, it runs at 868 MHz (or 433 MHz) at much lower power levels in much of Europe, or 923 MHz in Asia, etc.

This means that a Meshtastic or MeshCore network in Asia will never natively connect to one in Europe. Again this could be worked around with "hacky" bridge solutions like MQTT, but Reticulum would natively interconnect two different LoRa networks seamlessly as long as one common gateway point could be found: For example, an 868 MHz radio in one country connected to a 923 MHz radio in another via some other means like a fiber link, or a 2.4 GHz microwave connection, or the internet, or even packet radio. As long as some connectivity point (or multiple) can be found, then Reticulum routing between different physical networks would work seamlessly without any central servers required.

This is all possible without any sort of central coordination, which is the most important part of building a truly decentralized

Continued on next page

network. Network operators are free to create segments of the network in any way they see fit, and if/when those segments become connected, Reticulum handles the convergence of those networks automatically.

Reticulum's address space is global, and every node has a unique address guaranteed by the encryption Reticulum uses.

There's no potential for different Reticulum networks to have overlapping addresses, and no need for a central authority to hand out addresses in the fashion that IANA/ARIN/RIPE/etc. hand out IP addresses on the traditional internet.

Reticulum Applications

Although building the network well gives Reticulum a distinct advantage over Meshtastic and MeshCore, it is not enough to just build a network alone.

The developer of Reticulum realized this, of course, and built a number of applications that work on Reticulum seamlessly: NomadNet is one of the most popular, providing messaging, file sharing, and text-based browsing in a terminal app (which has mouse support too, thankfully).

Using a terminal won't appeal to many people though, so you can also use Sideband, a GUI app for Android and PC, or Meshchat to communicate, as well as many other apps which use Reticulum.

Fortunately, many of these communications apps work with each other, so you can choose between them at will. While you can really build essentially any app or protocol on top of Reticulum, many of the messengers standardize on a handful of homemade protocols: LXMF, LXST, and RRC.

While understanding what these protocols mean is not particularly important for people just looking to use the network, the important thing to know is that Reticulum already has an ecosystem of apps that connect with each other generally using the same underlying protocols, and provide similar functionality to Meshtastic's and MeshCore's apps for messaging and other functions.

Reticulum's Biggest Problem

Unfortunately, despite being what I'd consider perhaps the perfect public mesh networking platform, Reticulum has a big drawback holding it back from supplanting public MeshCore and Meshtastic networks today, and it's not the apps or anything to do with the software.

Reticulum's main problem is that it does not

have dedicated firmware for LoRa radios in the same way Meshtastic and MeshCore do.

Installing Meshtastic on a cheap device like a Heltec V3 creates a full, standalone Meshtastic node capable of sending & receiving messages, and relaying data throughout the network.

With Reticulum you can use the same cheap hardware with firmware called RNode to make LoRa connections. However, Reticulum's RNode firmware functions basically as a LoRa modem for a connected computer, not as a standalone mesh node itself.

RNode is completely unintelligent, requiring a connection to a computer running Reticulum to send and receive messages and to route messages to other nodes on the Reticulum network.

For most people who would simply be using the network, this is not actually a problem. Even with Meshtastic, it is very rare for most people to try and communicate using only a standalone device (one exception being the LILYGO T-Deck).

Instead, people commonly connect their Meshtastic-enabled LoRa radios to their phones or their computers, all of which are very capable devices which could easily run Reticulum while connected to RNode if people wanted to switch.

Where this does present a real problem to Reticulum is where it comes to infrastructure.

In the world of Meshtastic and MeshCore, many people are running remote and often solar-powered nodes on high hilltops or buildings to selflessly increase the capacity of the network.

When it comes to Reticulum, these remote nodes would not only need a LoRa radio running RNode, but a full computer running Reticulum to enable the mesh capabilities.

This computer could be as simple as a Raspberry Pi Zero, but even that level of additional price and added power consumption makes this setup fairly untenable for many unattended installations, especially solar-powered ones.

Progress is being made on this front. In particular, a port called microReticulum for ESP32 and better devices is continually being developed.

I really hope it succeeds, because the ability for current Meshtastic and MeshCore operators to switch to Reticulum routing with no additional hardware necessary could instantly, radically boost the adoption of a much more capable public mesh network like Reticulum in many communities.

What's Next

There's work to be done here, but at the end of the day Reticulum is the only solution that promises to let people create local networks, large and small, and interconnect those networks organically into a seamless, global mesh.

It's a killer feature that I think many people intuitively want from Meshtastic and MeshCore, but that those networks will never actually be able to provide.

I see a lot of advantages to all three of these apps. Meshtastic is really slick for a group of hikers who just want to text and share GPS easily instead of using voice walkie-talkies. MeshCore has some compelling features for local/neighborhood messaging, perhaps off-grid messaging at a large event like DEF CON.

If that's your use-case, then cool, but I am begging people with grander ambitions in the mesh networking space to focus on the most practical solution to the problem here.

There are many groups creating a region-wide or larger public Meshtastic network, when it is simply the wrong solution to the problem at hand, and this should be self-evident to anyone who's tried to use Meshtastic in this scenario.

I think many people get swept up in "collecting nodes" on Meshtastic and the thrill of seeing as many "connected" devices as they possibly can, but at least in my local area I see little consideration to how well-connected and functional the network actually is. When you look beyond being simply aware of nodes in your local area, and actually try to interact with those nodes, failed messages and communication issues are common.

Reticulum offers not just a messenger app or a way to share GPS & other sensor data, but a full-fledged alternative to the internet itself. This enables critical applications that would not be possible on Meshtastic and MeshCore.

For example, I can share access to any Kiwix file, including the entirety of Wikipedia, to anyone on Reticulum, which would make quick information sharing a breeze in a disaster scenario.

All of this is why I'm settling on Reticulum for what I want to build and see in the world. If other people are interested, I'll share more details about what I'm actually working on building myself here, and other mesh topics.

And certainly if you're in Northeast Minneapolis, get in touch. God only knows how critical tools like this could quickly become around here, and it's better to prepare today than be forced to learn all of this tomorrow.

June 14 BIARC Executive Board minutes

Call to Order: 12:04 PM

Present: Thomas Avila KHGG, Dave Miller KHGC, Fred Fischer WHSHAA, Shawn Farley WHGGXZ, Jim Tatar WHGDMN.

Excused: William Polhemus NHGCT, Bernie Fulp WHSPID.

Old Business:

Minutes of November 2025: Postponed as William Polhemus is not present, minutes will be presented at another time.

Digi Big letter: Thomas Avila will forward the needed information on the digi bigs to Jim Tatar for a thank you letter from BIARC.

List Serve transfer: A new list serve mechanism will be established. More on that later in the meeting.

We need to explore for a local hot spot for use by the club. Requested to find options by July meeting. Mark Kapono will be managing new service for club. ~~Cash. WHG~~ does not work for many programs the club needs at Kamara Center.

Treasurers Report:

The only expense paid was the fees for domain host and annual cost. See attached report.

We are not able to contact one of our past signatures and need to get the new approved board members on the signature list with our BOH account. Fred has the necessary paperwork for the bank and made a motion to transfer from the old signature card to a new signature as approved by the board.

Fred Fischer made a motion to end use of the old signature card and to adopt a new signature card. Shawn Farley gave a 2nd on the motion. The motion was voted on and passed unanimously. A paper for this motion for new signatures was circulated and signed by all available members and signatories with Les Hritner not in attendance today.

The debit card will be requested by Fred after the signature card work is complete.

Bylaws and Constitution:

A motion was made by Jim Tatar to adopt the updated Bylaws and Constitution with the most recent update as of May 17, 2026; all subject to further updates and or corrections if any are found. Dave Miller made a 2nd and the motion was passed unanimously to adopt both.

Minutes of May 2026:

Jim Tatar made the motion to accept the May minutes of both the Directors meeting and the General meeting as sent out to directors. Dave Miller made the 2nd, and the motion passed unanimously.

Working Groups reports:

Continued on next page

June 14 BIARC Executive Board minutes

Continued from previous page

Programs: The program chair is vacant- no report

Voice repeaters -William is not present.

Digital Systems -Shawn- no report

Operating Activities- William is not present

Public Service- Jim Tatar No change

Education and Outreach- Dave Miller, as attached

Field Day:

Main group will be at Willow Park next to the wedding pavilion, no pavilion rented so get there early and get the small pavilion. Need to bring pop up, cooler, food, radios, antennas, batteries.

New Business:

Fred submitted the liability insurance bill which he already paid from his own funds and Terry signed to reimburse him.

Jim made a motion that the list serve will only be for current members. Fred made a 2nd and the motion carried unanimously.

Jim made a motion that Mark Kapono manage the ham gram and Fred 2nd the motion. Motion was voted on and carried unanimously.

The ham gram will still go out to everyone on the current and new members list.

Education and Outreach is working with Isaac Pedro at Palos High school to help establish a radio club there. There will be an initial meeting to start the program.

Meeting Adjourned at 1:13 PM by Thomas Arla President

*Jim Tatar, WH6EMN,
Secretary*

May 17 Semi-annual General Membership Meeting minutes

Call to order: by Thomas Avila at 2:08 PM

It was determined there was a quorum present to conduct a meeting and vote.

First order of business Les Hittner made a motion to adopt his previously introduced changes to the Bylaws and Constitution. This is to change the term "Committee" to "Working "Groups" in both the Bylaws and the Constitution. Richard Turner made a 2nd on the motion. This passed by more than 2/3 vote.

After some discussion Les Hittner changed his motion to pass the Bylaws change that was introduced in November. This had a 2nd from Rich Turner. A vote was taken and the motion passed by more than 2/3's

There was further review of the December 2025 meeting activities in regards to the introduction of the motion and notification of members of the proposed changes to both the Bylaws and Constitution at that time.

Les Hittner made a new motion to adopt both the proposed changes to the Bylaws and the Constitution that were introduced in November. The motion was 2nd by Rich Turner and passed by majority or over 2/3's.

Les Hittner also made a motion to prohibit any online voting at a general membership meeting. Motion failed with no 2nd.

The Business being concluded Thomas Adjourned the General Business Meeting at 2:45 PM.

This was followed by a slide show of how digital is becoming more and more used in ham radio and at much lower power by John Bush.

After which Shawn Farley gave us an introduction to some of the various aspects of mesh communications and how they are integrated.

*Jim Tatar, WH6EMN,
Secretary*

STATE-WIDE MESHTASTIC LISTING as of July 4

COMPILED BY KH6RDO, comprehensive list continues on next several pages

Meshtastic cc7f	Ahikawa K-K	Hawaii	tracker-t1000-e	AH6DL roam a05e	Honolulu	Hawaii	t-echo
Meshtastic 12a8	Ahualoa	Hawaii	rak4631	HOV2 c318	HOVE	Hawaii	heltec-v3
Meshtastic 60f3	Ahualoa	Hawaii	rak4631	KH7MS-Home	HOVE	Hawaii	heltec-v3
WH6HAA-M1	Ainaloa	Hawaii	tracker-t1000-e	KH7MS-M2	HOVE	Hawaii	heltec-v3
HBMC1	Amalu	Hawaii	station-g2	WH6FC_Mesh_dcc6	HOVE	Hawaii	t-echo
BROVO 1	East Volcano	Hawaii	tracker-t1000-e	Kaloli-6CZ	HPP	Hawaii	rak4631
Coral_Hale	East Volcano	Hawaii	rak4631	Little Brother 3	HPP	Hawaii	tracker-t1000-e
Farley- Server	East Volcano	Hawaii	station-g2	Mesh HPP c918	HPP	Hawaii	heltec-v3
Foh-ENV	East Volcano	Hawaii	rak4631	Meshtastic 9948	HPP	Hawaii	tracker-t1000-e
GYZ 001	East Volcano	Hawaii	heltec-v3	Middle Brother	HPP	Hawaii	hltec-v4
Hitchiker	East Volcano	Hawaii	tracker-1000-e	ND08 in HPP	HPP	Hawaii	heltec-v3
hitchiker rf udp	East Volcano	Hawaii	heltec-v3	Trust Science Not Morons	HPP	Hawaii	heltec-v3
hitchikerAL	East Volcano	Hawaii	heltec-v3	Meshtastic 07e4	Hualalai 4 Seasons	Hawaii	
hitchiker-udp	East Volcano	Hawaii	portduino	solar kilo	Hualalai 4 Seasons	Hawaii	rak4631
KH6GG Node 2	East Volcano	Hawaii	heltec-vision-master-t190	Patches	Hualalai Villas	Hawaii	tracker-t1000-e
LM-Base	East Volcano	Hawaii	station-g2	Meshtastic 4dda	Kahului	Hawaii	heltec-mesh-node-t114
LM-Experimental	East Volcano	Hawaii	portduino	Dewey, nh6m	Kailua-Kona	Hawaii	heltec-wireless-tracker
LM-Meshsense	East Volcano	Hawaii	heltec-v3	Elab Pi Waveshare A021	Kailua-Kona	Hawaii	rak4631
Luke-40e3	East Volcano	Hawaii	nano_g2_ultra	K7JBS KOA	Kailua-Kona	Hawaii	heltec-v3
meshforge base1	East Volcano	Hawaii	rak4631	KH6ICU Pocket	Kailua-Kona	Hawaii	tracker-t1000-e
Meshtastic 5a60	East Volcano	Hawaii	heltec-v3	KH6ICU Truck	Kailua-Kona	Hawaii	rak4631
MLE_Net 5a60	East Volcano	Hawaii	heltec-v3	KH6KA - Home Base	Kailua-Kona	Hawaii	heltec-v3
Nurse Dude AlphanuZ	East Volcano	Hawaii	heltec-mesh-mode-t114	KH6KA - Queen Liliuokalani	Kailua-Kona	Hawaii	rak4631
Nurse Dude tdeck	East Volcano	Hawaii	t-deck	KH6KA - Router	Kailua-Kona	Hawaii	rak4631
nurse dude V4 qth	East Volcano	Hawaii	heltec-v4	KH6KA - Sunset Vista	Kailua-Kona	Hawaii	rak4631
Nurse Dudes Vision	East Volcano	Hawaii	heltec-vision-master-t190	Makalei nh6m	Kailua-Kona	Hawaii	heltec-v3
WH6GQD	East Volcano	Hawaii	tracker-t1000-e	NH6AR Pocket	Kailua-Kona	Hawaii	wismesh-tag
wh6gkz meshtoad	East Volcano	Hawaii	portduino	solar-huehue 7593	Kailua-Kona	Hawaii	rak4631
WH6GXZ Mini Mesh	East Volcano	Hawaii	portduino	WB7N Pocket 2	Kailua-Kona	Hawaii	tracker-t1000-e
wh6gkz-udp	East Volcano	Hawaii	portduino	WH6KB Palasades Roof 01	Kailua-Kona	Hawaii	rak4631
WH6GZX-Fox	East Volcano	Hawaii	portduino	WH6KB Repeater	Kailua-Kona	Hawaii	rak4631
JT Mobile Mesh	East Waimea	Hawaii	tracker-t1000-e	WH7Q Kailua Kona	Kailua-Kona	Hawaii	station-g2
Meshtastic 92ac	East Waimea	Hawaii	heltec-v3	Ahikawa NH6M	Kalaoa	Hawaii	heltec-v3
pi4-30db-whha	East Waimea	Hawaii	portduino	Dewey nh6m	Kalaoa	Hawaii	heltec-wireless-tracker
solar monolith beta	Hale Pohaku	Hawaii	rak4631	Meshtastic 4296	Kalaoa	Hawaii	
Mesh 9F54	Hapuna	Hawaii	seed_wio_tracker_i1	Kaloko 1490	Kaloko	Hawaii	rak4631
Kohala 8CA6	Hawi	Hawaii	rak4631	Meshtastic 0b20	Kaloko	Hawaii	
Kohala 8ca6	Hawi	Hawaii	rak4631	Meshtastic 1088	Kalopa	Hawaii	
Potala-II	Hawn Acres	Hawaii	rak4631	Meshtastic e776	Kalopa	Hawaii	
Tu's Ranch	Hawn Acres	Hawaii	rak4631	Meshtastic 6c0d	Kalopa Mauka	Hawaii	t-echo
Meshtastic 70c4	Haw'n Ocean View	Hawaii		9 bravo	Kamuela	Hawaii	rak4631
Meshtastic 621f	Hawn Paradise Park	Hawaii	heltec-mesh-mode-t114	KH6DK 5040	Kamuela	Hawaii	heltec-v3
BK72	Hillside-Sunrise Sub	Hawaii	tlora-v2-1-1p6	pi-zero-30db-hotel f35f	Kamuela	Hawaii	portduino
F2PB1	Hillside-Sunrise Sub	Hawaii	tlora-v2-1-1p6	RAK-128 6adf	Kamuela	Hawaii	rak4631
GIX8	Hillside-Sunrise Sub	Hawaii	tlora-v2-1-1p6	T-Beam 4294	Kamuela	Hawaii	t-beam
GIX9	Hillside-Sunrise Sub	Hawaii	t-deck	whha EOC 1W 9204	Kamuela	Hawaii	rak4631
GIXPRT2	Hillside-Sunrise Sub	Hawaii	tlora-v2-1-1n6	KH7BR-Kaumana	Kaumana	Hawaii	thinknode-M1
HI Mesh Project - Waiakea CERT Team 2	Hillside-Sunrise Sub	Hawaii	heltec-v3	Hoku Omni	Kawaihae	Hawaii	heltec-v3
WH6GIX	Hillside-Sunrise Sub	Hawaii	tlora-v2-1-1p6	Kalopi 4dd8	Kawaihae	Hawaii	heltec-v4
Demo1	Hilo	Hawaii	station-g2	Kohala G2 f728	Kawaihae	Hawaii	station-g2
Ghostline 2	Hilo	Hawaii	heltec-v3	PI3-30db Kawaihae 8ff0	Kawaihae	Hawaii	portduino
HI Mesh Project - Waiakea CERT Team 1	Hilo	Hawaii	heltec-v3	PI4K-30db surfpark	Kawaihae	Hawaii	portduino
HIJ HiMesh Project - Waiakea CERT 4	Hilo	Hawaii	heltec-v3	pizero-30db-india 3a53	Kawaihae	Hawaii	portduino
HIJ HiMesh Project - Waiakea CERT 5	Hilo	Hawaii	heltec-v3	Kelan's Phone	Kawaihae Rd	Hawaii	tracker-t1000-e
hij hlmESH Project-Waiakea CERT 3	Hilo	Hawaii	heltec-v3	KH 7b78	Kawaihae Rd	Hawaii	heltec-wireless-tracker
hij hlmESH Project-Waiakea CERT 6	Hilo	Hawaii	heltec-v3	Heltec mesh node T114	Kawaihae Rd Waimea	Hawaii	heltec-v3
JulietFiveSix	Hilo	Hawaii	heltec-mesh-mode-t114	Kika1	Kawailani	Hawaii	tracker-t1000-e
keychain_jblack_M	Hilo	Hawaii	rak4631	Meshtastic solar N56	Kawailani	Hawaii	seed-solar-node
KF8FUU V4 EDC	Hilo	Hawaii	heltec-v4	Richard A Pocket 1	Kawailani	Hawaii	tracker-t1000-e
KH6GG Pager	Hilo	Hawaii	t-lora-pager	Little Brother 1	Keaau	Hawaii	tracker-t1000-e
KH6RDO Hilo	Hilo	Hawaii	rak4631	Mesh HPP c9a0	Keaau	Hawaii	heltec-v3
Meshted Potatoes	Hilo	Hawaii	station-g2	Meshtastic ee30	Keaau	Hawaii	tlora-v2-1-1p6
Meshtastic 1210	Hilo	Hawaii	rak4631	ChrisH2T v6	Keahole	Hawaii	heltec_mesh_node_t114
Meshtastic 3151	Hilo	Hawaii	t-echo	Gibby	Keahole	Hawaii	tracker-t1000-e
Meshtastic 4474	Hilo	Hawaii		KBSLNC-2 BI-Mobile when I go	Keahole	Hawaii	lilygo-tbeam-s3-core
Meshtastic 8d30	Hilo	Hawaii	station-g2	Keahole solar 2	Keahole	Hawaii	rak4631
Meshtastic 8ddf	Hilo	Hawaii	tracker-t1000-e	X SX1262	Keahole	Hawaii	xiao-nrf52-kit
Meshtastic cac8	Hilo	Hawaii	heltec-v3	Keahole pt	Keahole Airport	Hawaii	rak4631
Meshtastic e048	Hilo	Hawaii	heltec-v3	KH6KA - Magic Sands	Keaouhou	Hawaii	heltec-v3
Naboa 1	Hilo	Hawaii	rak4631	Meshtastic 7d30	Keaouhou	Hawaii	
PHTO	Hilo	Hawaii	tracker-t1000-e	Meshtastic a314	Keaouhou	Hawaii	heltec-v4
PM T1000 d7e0 (mobile)	Hilo	Hawaii	wismesh-tag	CB202	Keaouhou Kona	Hawaii	heltec-v3
WD4VID - Aardvark	Hilo	Hawaii	station-g2	N8CMB	Keaouhou Kona	Hawaii	heltec-mesh-node-t114
WH6EMN-B	Hilo	Hawaii	tracker-t1000-e	Meshtastic c78b	Keaukaha	Hawaii	tracker-t1000-e
WH6EMN-Demo-M3	Hilo	Hawaii	tracker-t1000-e	WD4VID - Mini	Keaukaha	Hawaii	rak4631
WH6EMN-M1	Hilo	Hawaii	tracker-t1000-e	kilohana east e873	Kilohana	Hawaii	rak4631
WH6EMN-M2	Hilo	Hawaii	nano-g2-ultra	Kilohana solar West	Kilohana	Hawaii	rak4631
WH6FSA-M	Hilo	Hawaii	tracker-t1000-e	Meshtastic 6c8e	Kilohana Scout	Hawaii	rak4631
WH6GZZ	Hilo	Hawaii	station-g2	Hanaipoe mana ac9f	Kilohana Scout area	Hawaii	rak4631
WH6HEO_2680	Hilo	Hawaii	heltec-v3	HC Jumper	Kilohana Scout area	Hawaii	heltec-v3
WH6HEO_B487	Hilo	Hawaii	rak4631	Meshtastic a2e9	Kilohana Scout area	Hawaii	rak4631
WH6HEO_BB30	Hilo	Hawaii	heltec-v3	Meshtastic CC58	Kilohana Scout area	Hawaii	heltec-v3
WH6HEO_8F34	Hilo	Hawaii	seed-xiao-s3	Kohala Hoea Rd 3	Kohala	Hawaii	heltec-v3
WH6HEO_HFBfs	Hilo	Hawaii	rak4631	Kohala Hoea Rd 55-358-1	Kohala	Hawaii	heltec-v3
KD2HWH b394	Hilton Waikoloa	Hawaii	t-beam	Kohala Hoea Rd 55-358-2	Kohala	Hawaii	heltec-v3
Meshtastic fec4	Holualoa	Hawaii	t-beam	RAK 1W3 215c	Kohala	Hawaii	rak4631
WH6KB Holualoa	Holualoa	Hawaii	rak4631	Hawi 570f	Kohala Mtn Rd	Hawaii	rak4631
Honoka'a Area Repeater	Honokaa	Hawaii	rak4631	Kalopi 8ad1	Kohala Mtn Rd	Hawaii	heltec-v3
Honokaa Hospital M1	Honokaa	Hawaii	tracker-t1000-e	Kalopi repeater	Kohala Mtn Rd	Hawaii	station-g2
Noah-Honokaa	Honokaa	Hawaii	station-g2	Station G2 Control	Komohana	Hawaii	tracker-t1000-e
Solar Pad alpha	Honokaa	Hawaii	rak4631	6JA seed Hilo	Kona	Hawaii	t-deck
FIRETOG	Honokahau	Hawaii	t-deck	S5 RANGER MAGNUM	Kona Village	Hawaii	t-echo
AH6DL 6DL1	Honolulu	Hawaii	rak4631	Acti+B3:817on Potential	Kuakini Hieghts	Hawaii	
AH6DL Honolulu T	Honolulu	Hawaii	Liligo t-beam S3 core	Meshtastic 1d29			

Mobile1	Kukila Hilo	Hawaii	heltec-v3	gunwale	Volcano Golf Sub	Hawaii	tracker-t1000-e
Meshtastic bfea	Kukio	Hawaii	t-echo	Meshtastic a390	WaaWaa	Hawaii	heltec-wsl-v3
Potala	Kurtistown	Hawaii	rak4631	HiMesh-Project-Hilo	Waiakea Uka	Hawaii	heltec-wsl-v3
Meshtastic 2d76 (mobile)	Lalamilo	Hawaii	tracker-t1000-e	Sodna	Waianuenue	Hawaii	t-beam
Meshtastic 5e38	Lalamilo	Hawaii	rp2040-lora	Meshtastic da94	Waianuenue Hilo	Hawaii	heltec-v3
Meshtastic 6453	Lalamilo	Hawaii	t-echo	Packmule	Waikii	Hawaii	heltec_mesh_node_t114
Meshtastic 8295	Lalamilo	Hawaii	tracker-t1000-e	PI3-30db- Waikii 8ff0	Waikii	Hawaii	portduino
Meshtastic be48	Lalamilo	Hawaii	lilygo-tbeam-s3-core	PI400-30db	Waikii	Hawaii	portduino
Meshtastic cc87	Lalamilo	Hawaii		Solar HP	Waikii Waimea	Hawaii	rak4631
Meshtastic e18e	Lalamilo	Hawaii	tracker-t1000-e	solar waikii west	Waikii Waimea	Hawaii	rak4631
PI400-30db	Lalamilo	Hawaii	portduino	Waikii	Waikii Waimea	Hawaii	rak4631
Solar 482f	Lalamilo	Hawaii	rak4631	BuddyBopper01	Waikoloa	Hawaii	heltec-v4
solar IP67 gps alpha	Lalamilo	Hawaii	rak4631	K85LNC visiting near Waikoloa	Waikoloa	Hawaii	lilygo-tbeam-s3-core
WH6EHJ - 2fc5	Lalamilo	Hawaii	rak4631	KH_7B78	Waikoloa	Hawaii	heltec_wireless_paper
KH6EKD-2	Laupahoe	Hawaii	heltec-v3	MCD 3be9	Waikoloa	Hawaii	rak4631
Meshtastic 71ea	Laupahoe	Hawaii	rak4631	Meshtastic 0488	Waikoloa	Hawaii	t-deck-pro
WH6KB Pocket	Lower Palasides	Hawaii	tracker-t1000-e	Meshtastic 34e4	Waikoloa	Hawaii	seed-wio-tracker-l1
9BD0	Lower Volcano	Hawaii	tracker-t1000-e	Mobius T-Echo	Waikoloa	Hawaii	t-echo
WH6GXZ-ecom	Lower Volcano	Hawaii	portduino	ORCA Uconsole	Waikoloa	Hawaii	portduino
H2T	Lower Waimea Town	Hawaii	heltec-mesh-node-t114	7772-Tracker 2	Waikoloa Beach	Hawaii	tracker-t1000-e
Meshtastic ace1	Lower Waimea Town	Hawaii	rak4631	Dekko Drone	Waikoloa Beach	Hawaii	tracker-t1000-e
solar monolith	Lower Waimea Town	Hawaii	rak4631	H2T Kncral438	Waikoloa Beach	Hawaii	heltec_mesh_mode_t114
LMTK-23ac	Mana	Hawaii	rak4631	M3at	Waikoloa Beach	Hawaii	tracker-t1000-e
HPKU Hale Pohaku	Mauna Kea	Hawaii	station-g2	Meshtastic 012e	Waikoloa Beach	Hawaii	
Ditto	Mauna Kea Beach	Hawaii	heltec-v3	Meshtastic f22c	Waikoloa Beach	Hawaii	
Onix	Mauna Kea Beach	Hawaii	heltec-v3	Meshtastic 4efc	Waikoloa Village	Hawaii	t-beam
7771-Tracker 1	Mauna Lani	Hawaii	seed_wio_tracker_l1	Orca Techo	Waikoloa Village	Hawaii	t-echo
Meshtastic 301c	Mauna Lani	Hawaii		6JA seed Hilo	Waikolu	Hawaii	tracker-t1000-e
Solar Tango Mauna Lani	Mauna Lani	Hawaii	rak4631	6KSN Seeded	Waikolu	Hawaii	tracker-t1000-e
MLOA-01 BIARC	Mauna Loa	Hawaii	station-g2	all your base are belong to us	Waimea	Hawaii	rak4631
MLOA-H Test	Mauna Loa	Hawaii	heltec-v3	Chris Hawkins	Waimea	Hawaii	rak4631
SW	Mid Kawaihae Rd	Hawaii	tracker-t1000-e	Drone	Waimea	Hawaii	tracker-t1000-e
APRS Igate Eden Rock 96771	Mountain View	Hawaii	heltec-vision-master-t190	elab router pi4-30db ba5a	Waimea	Hawaii	portduino
KH6GG (mobile)	Mountain View	Hawaii	t-deck	G2 8010	Waimea	Hawaii	station-g2
KH6GG T-1000	Mountain View	Hawaii	tracker-t1000-e	Hawi Rd Waimea e3c9	Waimea	Hawaii	rak4631
KH6KU	Mountain View	Hawaii	heltec-wsl-v3	Heltec V4 c968	Waimea	Hawaii	heltec-v4
Unlimited_Laa	Mountain View	Hawaii	tracker-t1000-e	Hokuula Solar	Waimea	Hawaii	heltec-v3
WH6EPS-B	Mountain View	Hawaii	station-g2	HPA MQTT Gateway	Waimea	Hawaii	rak4631
WH6EPS-M	Mountain View	Hawaii	nano-g2-ultra	Kamika 336b	Waimea	Hawaii	tracker-t1000-e
WH6EPS-M2	Mountain View	Hawaii	tracker-t1000-e	Mana Road 59ab	Waimea	Hawaii	rak4631
WH6EPS-M3	Mountain View	Hawaii	station-g2	Meshtastic 0429	Waimea	Hawaii	
WH6JOE-B	Mountain View	Hawaii	heltec-v3	Meshtastic 0a4c	Waimea	Hawaii	rak4631
WH6JOE-M1	Mountain View	Hawaii	tracker-t1000-e	Meshtastic 2048	Waimea	Hawaii	heltec-v4
WH6LC-B1	Mountain View	Hawaii	heltec-wsl-v3	Meshtastic 9c38	Waimea	Hawaii	tracker-t1000-e
Max Davis	Mud Lane	Hawaii	rak4631	Meshtastic b981	Waimea	Hawaii	rak4631
Solar Mamalahoa	Mud Lane	Hawaii	heltec-v3	Meshtastic d2b9	Waimea	Hawaii	tracker-t1000-e
AH6V-00ec	Ninole	Hawaii	heltec-v3	pi4-30db-hoku desk	Waimea	Hawaii	portduino
AH6V-6d04	Ninole	Hawaii	heltec-v3	solar mini alpha	Waimea	Hawaii	rak4631
AH6V-Ninole Mauka	Ninole	Hawaii	heltec-v3	Solar Papa	Waimea	Hawaii	heltec-v3
KH6GM G2 f5c4	Ninole	Hawaii	station-g2	T-Beam S3 9d24	Waimea	Hawaii	lilygo-tbeam-s3-core
KH6GM Spec5 7f60	Ninole	Hawaii	heltec-wireless-tracker	Waikii 74c0	Waimea	Hawaii	heltec-v3
KH6GM T1000 bcd5 (mobile)	Ninole	Hawaii	tracker-t1000-e	Waikii G2	Waimea	Hawaii	station-g2
Paauilo Mauka 1609	Paauilo	Hawaii	rak4631	Waikii Repeater	Waimea	Hawaii	rak4631
Pi-zero-22db alpha	Paauilo	Hawaii	portduino	Waimea Homesteads	Waimea	Hawaii	rak4631
WH6GDC 9fbc	Paauilo	Hawaii	heltec-v3	Wardriver beta	Waimea	Hawaii	rak4631
Meshtastic 4a6a	Paauilo Mauka	Hawaii	rak4631	Cyclops	Waimea Town	Hawaii	rak4631
KH6HAK-B2	Pahoa	Hawaii	station-g2	Solar Lima	Waimea Town	Hawaii	rak4631
KH6HAK-M1	Pahoa	Hawaii	tracker-t1000-e	T-Beam Control	Waimea Town	Hawaii	t-beam
Fortyonedash	Panaewa	Hawaii	wismesh-tag	T-Beam S3 Alpha	Waimea Town	Hawaii	lilygo-tbeam-s3-core
HiMesh Project - Hilo	Panaewa	Hawaii	heltec-v3	LaeLae Repeater 4952	Waimea Watershed	Hawaii	rak4631
Meshtastic 3eca	Panaewa	Hawaii		Meshtastic 03a7	Waimea Watershed	Hawaii	tracker-t1000-e
Meshtastic 49e4	Panaewa	Hawaii	heltec-v3	Meshtastic 4154	Waimea Watershed	Hawaii	rak4631
Meshtastic 22c1	Papaikou	Hawaii	tracker-t1000-e	Meshtastiv b1d4	Waimea Watershed	Hawaii	heltec-v3
Meshtastic cfe6	Papaikou	Hawaii	seed-wio-tracker-l1	Ryder e7a2	Wainaku	Hawaii	seed-wio-tracker-l1
Onomea Solar	Papaikou	Hawaii	seed-solar-node	Meshtastic 6570	West HI Concrete	Hawaii	heltec-v3
KH6RDO-Pepekeo	Pepekeo	Hawaii	tlora-v2-1-1p6	Meshtastic 7764	West HI Concrete	Hawaii	heltec-v3
Kilohana Solar	Pohakuloa	Hawaii	rak4631	Meshtastic e3b7	Wright Rd Volcano	Hawaii	tracker-t1000-e
Solar Keamuku	Pohakuloa	Hawaii	rak4631	Borg-Server		Hawaii	station-g2
GolfFiveSix	Puainako	Hawaii	heltec-mesh-mode-t114	CB999		Hawaii	t-deck
Meshtastic 2dcd	Puako	Hawaii		ele'ele		Hawaii	heltec-v3
Meshtastic e385	Puuanahulu	Hawaii	heltec_mesh_node_t114	Kelan's Car		Hawaii	heltec-v3
HRCC Fast Node	UH West Hawaii	Hawaii	heltec-mesh-node-t114	kg6hwf		Hawaii	heltec-v3
solar node golf	Upper HOVE	Hawaii	rak4631	KH6DK 3150		Hawaii	heltec-v3
Hale Pohaku alpha 195f	Upper Humuula	Hawaii	rak4631	KH6GG-uGG		Hawaii	portduino
Waikii Coast	Upper Waikii	Hawaii	rak4631	LM-Logging		Hawaii	portduino
Pocket V2 Gamma	Upper Waikoloa	Hawaii	rak4631	Meshtastic 7871		Hawaii	heltec-mesh-node-t114
Car54 f324	Volcano	Hawaii	tracker-t1000-e	Meshtastic 7c67		Hawaii	rak4631
HA01 (mobile)	Volcano	Hawaii	tracker-t1000-e	Meshtastic e744		Hawaii	heltec-v3
IST2	Volcano	Hawaii	rak4631	MLOA-2		Hawaii	station-g2
KH7DQ Doug	Volcano	Hawaii	tracker-t1000-e	ORCA Uconsole		Hawaii	portduino
KH7DQ-Base	Volcano	Hawaii	station-g2	Solar Sensor		Hawaii	rak4631
Meshtastic 2b34	Volcano	Hawaii		SuM19374		Hawaii	heltec-v3
Meshtastic 8dc8	Volcano	Hawaii	heltec-v3	VolcanoAI		Hawaii	portduino
Meshtastic fda1	Volcano	Hawaii		WH6EBS-M2		Hawaii	tracker-t1000-e
MLE top 28	Volcano	Hawaii	rak4631	wh6gxz-POE		Hawaii	rak4631
MLE_Net 1424	Volcano	Hawaii	heltec-v3	WH6GXZ-ube		Hawaii	portduino
VERT Planning Section Chief	Volcano	Hawaii	tracker-t1000-e	WH6GZZ		Hawaii	heltec-mesh-node-t114
VolcanoAI	Volcano	Hawaii	portduino	WH6HAA		Hawaii	tracker-t1000-e
WH6EBS R4	Volcano	Hawaii	station-g2	WH6HEO-Cold Xiaoe		Hawaii	seed-xiao-s3
WH6EBS-M1	Volcano	Hawaii	tracker-t1000-e	Name		Island	Device
WH6EBS-R3	Volcano	Hawaii	station-g2	WH6EY-Repeater	Waialua	Kauai	rak4631
WH6LQ	Volcano	Hawaii	tracker-t1000-e	WH6EY-Unit1	Waialua	Kauai	rak4631
WH7BR-Base	Volcano	Hawaii	rak4631	WH6EY-Unit2	Waialua	Kauai	rak4631
WH7BR-M1	Volcano	Hawaii	tracker-t1000-e	Haiku Makai	Haiku	Maui	Liligo t-beam S3 core



Approximate Location

Robert	Haiku	Maui	t-deck	NH7ET mobile	Kualapuu	Molokai	heltec-mesh-pocket
Haleakala Summit Repeater	Haleakala	Maui	rak4631	Potato Hill Molokai Repeater	Kualapuu	Molokai	rak4631
ISET 3	Haleakala	Maui	t-beam	ENTM_Solar	Molokai High School	Molokai	rak4631
WS85 Ho'okipa	Hana	Maui	rak4631	ENTM_T-deck (mobile)	Molokai High School	Molokai	t-deck
Meshtastic 10a5	Kaanapali	Maui	heltec_mesh_pocket	ENTM_Terminal	Molokai Shores	Molokai	rak4631
Meshtastic 5384	Kaanapali	Maui	t-beam	ENTM_Peanut	Molokai Shores	Molokai	heltec-v3
Meshtastic 5f60	Kaanapali	Maui	heltec-v3	Molokai Pauwulu KH6ML 1f38	Waialua	Molokai	rak4631
Meshtastic 73a4	Kaanapali	Maui	heltec-v3	Molokai MPS MOD6 19d		Molokai	rak4631
Mat2 f48b	Kahalui	Maui	rak4631	Meshtastic 63c0	Pearl Harbor	Oahu	
6C t-deck	Kahului	Maui	t-deck	Mesh at1	Aiea	Oahu	heltec-v4
KG6HWF	Kahului	Maui	t-echo	Meshtastic 62ba	Aiea	Oahu	
Mama Peaches 1e75	Kahului	Maui	rak4631	Meshtastic ab78	Aiea Ridge	Oahu	lilygo-tbeam-s3-core
Maui Ali	Kahului	Maui	heltec-v4	DL fef1	Ala Moana	Oahu	tracker-t1000-e
Maui No Ka Oi	Kahului	Maui	tracker-t1000-e	RUSwork 003c	Ala Moana	Oahu	heltec-v3
Meshtastic 1a8d	Kahului	Maui	tracker-t1000-e	AG Gn d068	East Kapolei	Oahu	heltec-v3
Meshtastic 755b	Kahului	Maui	tracker-t1000-e	AG-X Base Node	East Kapolei	Oahu	heltec-v3
Meshtastic ac54	Kahului	Maui		Meshtastic 6424 KH6OWL	East Kapolei	Oahu	heltec-v3
Meshtastic fc08	Kahului	Maui		Meshtastic 6a60	East Kapolei	Oahu	
MIHNAkoo	Kahului	Maui	t-beam	Mrs. Loaf	East Kapolei	Oahu	t-echo
MIHTdeck	Kahului	Maui	t-deck	Sugoi Mesh	East Kapolei	Oahu	tracker-t1000-e
Mozul	Kahului	Maui	t-echo	Sugoi Mesh R3 K	East Kapolei	Oahu	rak4631
PeakMesh 7702	Kahului	Maui	rak4631	SWTI 37C	East Kapolei	Oahu	rak4631
	1001010 Kealahou Ridge	Maui	tracker-t1000-e	hawaii_gaz	Enchanted Lake	Oahu	heltec-v3
North Kihei Bouncer	Kiehi	Maui	rak4631	Hawaii_gaz	Enchanted Lake	Oahu	heltec-v3
DSN_Kihei0	Kihei	Maui	tracker-t1000-e	KH6ML Bad Echo	Enchanted Lake	Oahu	
Hello From Canada	Kihei	Maui	tlora-v2-1-1p6	Meshtastic 4c7f	Enchanted Lake	Oahu	
Kihei1	Kihei	Maui	rak4631	Meshtastic 8454	Enchanted Lake	Oahu	t-echo
KiheiBase	Kihei	Maui	rak4631	WH7GG T-Echo	Enchanted Lake	Oahu	t-echo
Meshtastic 583c8	Kihei	Maui	heltec-v3	Meshtastic 6a44	Ewa	Oahu	
Meshtastic c814	Kihei	Maui		WH6GOW fc7d	Ewa	Oahu	heltec-mesh-mode-t114
Octogrid 01	Kihei	Maui	t-echo	AH6WN RAK Mobile	Ewa Beach	Oahu	rak4631
Octogrid 6	Kihei	Maui	dly-v1	Atlavox B2 6894	Ewa Beach	Oahu	rak4631
Octopie Base Node	Kihei	Maui	portduino	Ewa by Gentry	Ewa Beach	Oahu	rak4631
pmow mobile	Kihei Ridge	Maui	t-echo	GreenRed ff58	Ewa Beach	Oahu	lilygo-tbeam-s3-core
Cloud Castle Farm	Kula	Maui	lilygo-tbeam-s3-core	HelGreenBlack 5898	Ewa Beach	Oahu	heltec-v3
Meshtastic ebf5	Kula	Maui	t-echo	WH6GOW 7924	Ewa Beach	Oahu	rak4631
WH6FXV-1 Fixed	Kula	Maui	heltec-v3	WH6GOW Node2	Ewa Beach	Oahu	heltec-mesh-node-t114
KH6TU	Lahaina	Maui	heltec-v3	Neacom	Ewa Forest Reserve	Oahu	t-beam
Meshtastic 2e09	Lahaina	Maui		Meshtastic 90b4	Ewa Plains	Oahu	t-beam
Spud Mobile	Lahaina	Maui	lilygo-tbeam-s3-core	Meshtastic 22c9	Halawa	Oahu	seed Card Tracker T1000-E
VRN1 Node	Launipoko	Maui	heltec-mesh-node-t114	WH6FIX Mobile	Haleiwa	Oahu	seed-wio-tracker-I1
Big Kahuna 44e4	Launipoko Lahaina	Maui	tracker-t1000-e	7o Minami ch20 c067	Hawaii Kai	Oahu	t-echo
Launipoko df60	Launipoko Lahaina	Maui	rak4631	KH6D Spec5	Hawaii Kai	Oahu	t-deck
Meshtastic 90fa	Maalea	Maui	t-echo	Last Responder	Hawaii Kai	Oahu	rak4631
6HHG Heltec_V3	Makawao	Maui	heltec-v3	Meshtastic e68b	Hawaii Kai	Oahu	heltec-mesh-node-t114
6HHG Wio-Tracker Pro	Makawao	Maui	seed-solar-node	WisMesh Pocket 718a	Hawaii Kai	Oahu	rak4631
Colezaddy	Makawao	Maui	rak4631	AG_Blue_Radio	Helemano	Oahu	heltec-v4
Colin Makawao	Makawao	Maui	tlora-v2-1-1p6	WH6FIX 2	Hickam	Oahu	heltec-v3
Kanaka1	Makawao	Maui	rak4631	Pensacola Gardens	Honolulu	Oahu	rak4631
KH6UU d03c	Makawao	Maui	rak4631	Hawaii Traveler	Kahala	Oahu	heltec-v4
Meshtastic d287	Makawao	Maui	t-echo	K9 43e0	Kahala	Oahu	heltec-v3
Ratz G2	Makawao	Maui	station-g2	KH7EC-R	Kahala	Oahu	rak2560
Silversword aabc	Makawao	Maui	heltec-v3	Meshtastic 4fa9	Kahala	Oahu	wismesh-tag
TG2N	Makawao	Maui	nano-g2-ultra	Meshtastic f504	Kahala	Oahu	heltec-v3
Typhoon Power 24	Makawao	Maui	heltec-mesh-mode-t114	Mr. Loaf	Kahala	Oahu	t-echo
WS85 54e4	Makawao	Maui	rak4631	KH7TV Solar Base	Kahaluu	Oahu	rak4631
Black Bag	Olinda	Maui	t-echo	Meshtastic 37d4	Kahaluu	Oahu	seed-wio-tracker-I1
KN6MCI T-Echo	Olowalu	Maui	t-echo	Tigger	Kahaluu	Oahu	tracker-t1000-e
Team Of One	Olowalu	Maui	heltec-v3	BTC11Green	Kailua	Oahu	heltec-v3
WS85 WX 4011	Olowalu	Maui	rak4631	BTCTW3	Kailua	Oahu	t-deck
Blue Mesh	Paia	Maui		Cosette	Kailua	Oahu	seed-wio-tracker-I1
Meshtastic 706C	Paia	Maui	heltec-v3	GTR B-Base	Kailua	Oahu	seed-solar-node
Meshtastic 7568	Paia	Maui	liligo-tbeam-s3-core	MattMobile	Kailua	Oahu	heltec-v3
D19M	Pukalani	Maui	rak4631	Meshtastic 1c46	Kailua	Oahu	rak4631
Meshtastic 4b68	Pukalani	Maui	station-g2	Meshtastic 39db	Kailua	Oahu	seed-wio-tracker-I1
Tavis T-Echo	Pukalani	Maui	t-echo	Meshtastic 5f6f	Kailua	Oahu	
Tbeam	Pukalani	Maui	lilygo-tbeam-s3-core	Meshtastic 793b	Kailua	Oahu	seed-wio-tracker-I1
Meshtastic 1c5c	Puunene	Maui	heltec-v3	Meshtastic 86d4	Kailua	Oahu	
MIH Master	Puunene	Maui	t-beam	Meshtastic c457	Kailua	Oahu	
6C seed	Wailuku	Maui	tracker-t1000-e	Meshtastic dfb7	Kailua	Oahu	
6C T-deck	Wailuku	Maui	t-deck	MPCC-Ron	Kailua	Oahu	seed-wio-tracker-I1
Mat1 ed54	Wailuku	Maui	rak4631	Paul	Kailua	Oahu	seed-wio-tracker-I1
Mat3 7052	Wailuku	Maui	rak4631	WH6GTR A-Mobile	Kailua	Oahu	seed-wio-tracker-I1
Mat4 8355	Wailuku	Maui	tracker-t1000-e	WH6GTR Base	Kailua	Oahu	seed-solar-node
Mat5 d67f	Wailuku	Maui	tracker-t1000-e	X 23f3	Kailua	Oahu	rak4631
Meshtastic 4283	Wailuku	Maui	seed-wio_tracker_I1	X Solar - Hillside RPTR	Kailua	Oahu	rak4631
Meshtastic 73e8	Wailuku	Maui		KH7EC	Kaimuki	Oahu	tracker-t1000-e
pmow test	Wailuku	Maui	t-echo	KH7EC-A	Kaimuki	Oahu	heltec-v3
Randy 7f40	Wailuku	Maui	heltec-v3	Kakaako 4678	Kakaako	Oahu	heltec-v3
Wailuku Repeater (MQTT)	Wailuku	Maui	station-g2	N1PDG-1	Kakaako	Oahu	heltec-v3
Atlavox 54		Maui	rak4631	Tiki's Loft A	Kakaako	Oahu	
D19R		Maui	rak4631	Meshtastic addc	Kalaeloa	Oahu	
Haiku K9-H 2f26		Maui	rak4631	Newstastic	Kalaeloa	Oahu	heltec-v4
KH6UU repeater		Maui	rak4631	Kalaeloa	Kalaeloa Airport	Oahu	rak4631
SunMesh 915a Solar		Maui	heltec-v3	Meshtastic e8a7	Kalihi Valley	Oahu	
WH6AV 3b54		Maui	heltec-v3	WH6EGX mobile	Kalihi Valley	Oahu	wismesh_tag
Meshtastic 607d	Honolulu	Molokai	t-echo	APRS Kaneohe iGate	Kaneohe	Oahu	rak4631
ENTM_Paper	Kaunakakai	Molokai	heltec-wireless-paper	ART1 ECHO	Kaneohe	Oahu	t-echo
ENTM-Solar	Kaunakakai	Molokai	heltec-mesh-node-t114	Green Machine	Kaneohe	Oahu	rak4631
NH7ETMobile1	Kaunakakai	Molokai	lilygo-tbeam-s3-core	HEE1 d340	Kaneohe	Oahu	seed-wio_tracker_I1
PSOACAF	Kaunakakai	Molokai	heltec-v3	Keaialu Repeater	Kaneohe	Oahu	rak4631
MolokaiMesh1	Kualapuu	Molokai	rak4631	KH6ML Tracker	Kaneohe	Oahu	seed-wio-tracker-I1
NH7ET base	Kualapuu	Molokai	t-echo	KH6ML-e Echo	Kaneohe	Oahu	t-echo
NH7ET mobile	Kualapuu	Molokai	t-echo	KH7EH-04	Kaneohe	Oahu	station-g2

KH7EH-15	Kaneohe	Oahu	lilygo-tbeam-s3-core	Hikers Solar PW Manoa	Upper Manoa	Oahu	rak4631
Meshtastic 6c2f	Kaneohe	Oahu		SLH2 c1ab	Upper Palolo	Oahu	t-echo
Meshtastic 93b0	Kaneohe	Oahu	tracker-t1000-e	SLH1 9ef2 (mobile)	Upper Palolo	Oahu	t-echo
Meshtastic da25	Kaneohe	Oahu	tracker-t1000-e	Traveler 9430	Upper Palolo	Oahu	t-deck
Meshtastic f779	Kaneohe	Oahu	thinknode_M1	Meshtastic 3e68	Wahiawa	Oahu	
WH6FIX 4	Kaneohe	Oahu	seed-wio-tracker-I1	KH7EC-A	Waialae Kahala	Oahu	heltec-v3
WH6FIX 6	Kaneohe	Oahu	seed_wio_tracker_I1	KH7EC-B	Waialae Kahala	Oahu	heltec-v3
WH6FXV-3-06be	Kaneohe	Oahu	t-echo	KH7EC-H	Waialae Kahala	Oahu	heltec-v3
Drakemesh	Kapahulu	Oahu	seed_wio_tracker_I1	LoRa 6CP 514c	Waialae Kahala	Oahu	heltec-v3
KH6ML EDC	Kapahulu	Oahu	seed_wio_tracker_I1	Meshtastic b8a6	Waialae Kahala	Oahu	heltec-mesh-node-t114
Meshtastic 9946	Kapahulu	Oahu	t-echo	Meshtastic de16	Waialae Kahala	Oahu	
Meshtastic af74	Kapahulu	Oahu	seed_wio_tracker_I1	sukebe mesh	Waialae Kahala	Oahu	t-lora-pager
Yuki Mobile Stubby	Kapahulu	Oahu	thinknode_m1	T Deck Complete	Waialae Kahala	Oahu	t-deck
AH6WN RAK1	Kapolei	Oahu	rak4631	WH60MG t1000e	Waialae Kahala	Oahu	tracker-t1000-e
HiMesh Project-Ewa	Kapolei	Oahu	tracker-t1000-e	Meshtastic Oddc	Waialae-Kahala	Oahu	seed_wio_tracker_I1
KH6OWL ffc8	Kapolei	Oahu	heltec-v3	Meshtastic 1d7c	Waialae-Kahala	Oahu	seed_wio_tracker_I1
KH7JF-2 496c	Kapolei	Oahu	heltec-mesh-node-t114	Meshtastic 8d79	Waialae-Kahala	Oahu	seed_wio_tracker_I1
Meshtastic 7c74	Kapolei	Oahu		Meshtastic faf9	Waialae-Kahala	Oahu	seed_wio_tracker_I1
KH6ML q T-Echo q	Kaalaau Kaneohe	Oahu	t-echo	Sea Dog	Waialae-Kahala	Oahu	t-deck
Meshtastic 4194	Koko Head	Oahu		HiMesh Project - Waianae	Waianae	Oahu	station-g2
D3 301M	Koolau	Oahu	heltec-v3	D3 310	Waikale	Oahu	heltec-v3
Meshtastic 6ba0	Koolau	Oahu	tracker-t1000-e	D3 310 w	Waikale	Oahu	heltec-v3
Tikis.com near Band & Bar Solar	Kuhio Beach	Oahu	rak4631	Cincinnati Mobile Rock	Waikiki	Oahu	seed-wio-tracker-I1
SWTI 37A	Kunia	Oahu	tracker-t1000-e	Daniel Meyers	Waikiki	Oahu	tracker-t1000-e
Pensacola mesh 05	Lanikai	Oahu	tracker-t1000-e	effoff.io c1 discord.gg/florida	Waikiki	Oahu	tracker-t1000-e
Meshtastic 09b4	Lower Makiki	Oahu		holdsteady	Waikiki	Oahu	tracker-t1000-e
WH6HEC-2	Lower Makiki	Oahu	tracker-t1000-e	Kevin.NB7O	Waikiki	Oahu	tracker-t1000-e
Makakilo-09	Makakilo	Oahu	rak4631	KH6ML Work E-Ink at DE	Waikiki	Oahu	heltec-wireless-paper
Meshtastic 12ec	Makakilo	Oahu	rak4631	King1000e	Waikiki	Oahu	tracker-t1000-e
Meshtastic 3ade	Makakilo	Oahu	tracker-t1000-e	LASmesh Mobile M1	Waikiki	Oahu	rak4631
Meshtastic d5de	Makakilo	Oahu	heltec-mesh-mode-t114	Meshtastic 05b4	Waikiki	Oahu	
Meshtastic d5de	Makakilo	Oahu		Meshtastic 1665	Waikiki	Oahu	
Windy	Makakilo	Oahu	seed_wio_tracker_I1	Meshtastic 4b27	Waikiki	Oahu	
6MLs KH6ML Card at Work	Makiki	Oahu	tracker-t1000-e	Meshtastic a0f8	Waikiki	Oahu	
KH6WR_8019	Makiki	Oahu	seed-wio-tracker-I1	Meshtastic e6d2	Waikiki	Oahu	tracker-t1000-e
Meshtastic 1bcf	Makiki	Oahu	tracker-t1000-e	Michelle.K7MGO	Waikiki	Oahu	tracker-t1000-e
Meshtastic 1ef1	Makiki	Oahu		NH7IT waipuna	Waikiki	Oahu	rak4631
Meshtastic 3ffe	Makiki	Oahu		ShakataGaNaI/L1Pro	Waikiki	Oahu	seed-wio-tracker-I1
Meshtastic 871c	Makiki	Oahu		ShakataGaNaI/WisTag bayme.sh	Waikiki	Oahu	wismesh-tag
Meshtastic d85f	Makiki	Oahu		TaKo0_Actual	Waikiki	Oahu	tracker-t1000-e
New Gen	Makiki	Oahu	heltec-mesh-pocket	TwinPilot	Waikiki	Oahu	heltec-mesh-mode-t114
Punchbowl/Nuuanu KH6ML	Makiki	Oahu	rak4631	Wallops Mobile	Waikiki	Oahu	rak4631
RM-A001	Makiki	Oahu	heltec-v4	7H02 Solar	Waimanalo	Oahu	rak4631
T1000	Makiki	Oahu	tracker-t1000-e	Baywatch 124b	Waimanalo	Oahu	heltec-mesh-pocket
KH7TV Echo	Makiki - Roosevelt	Oahu	t-echo	BluePanda	Waimanalo	Oahu	heltec-v3
Meshtastic e8cb	Makiki - Roosevelt	Oahu		DanaP	Waimanalo	Oahu	seed-wio-tracker-I1
NH7IT 01	Makiki - Roosevelt	Oahu	t-echo	GoldenPanda	Waimanalo	Oahu	heltec-v4
Basement not monitored 60CD	Makiki Punchbowl	Oahu	heltec-v3	Meshtastic 3025	Waimanalo	Oahu	
Manoa/Tantalus mk23	Manoa	Oahu	t-beam	Meshtastic b427	Waimanalo	Oahu	
NH7IT Manoa	Manoa	Oahu	heltec-v3	Meshtastic bb08	Waimanalo	Oahu	heltec_wireless_paper
Upper Manoa - mk23 808	Manoa	Oahu	rak4631	Meshtastic c9f0	Waimanalo	Oahu	
Bradventure	Maunawili	Oahu	heltec-v3	Meshtastic e060	Waimanalo	Oahu	
Meshtastic 97c4_EML2_Mobile	Maunawili	Oahu	tracker-t1000-e	PP d185	Waimanalo	Oahu	thinknode-M6
Pika	Maunawili	Oahu	rak4631	RUSS bb66	Waimanalo	Oahu	rak4631
Meshtastic 57f8	MCBH Kaneohe	Oahu		Aumakua	Waimano	Oahu	tracker-t1000-e
Meshtastic d724	MCBH Kaneohe	Oahu	heltec-v3	D3 301M	Waimano	Oahu	heltec-v3
Meshtastic a3a8	Millilani	Oahu		D3 310B	Waimano	Oahu	heltec-v3
Millilani ead0	Millilani	Oahu	heltec-v3	Meshtastic 4601	Waimano	Oahu	
Millilani V4	Millilani	Oahu		6136_5634	Waimanu Valley Ridge	Oahu	lilygo-tbeam-s3-core
Tdeck T2SP	Millilani	Oahu	t-deck	Meshtastic 3df8	Waipahu	Oahu	
Meshtastic 4e14	Moanalua	Oahu	heltec-v4	Meshtastic a26c	Waipahu	Oahu	heltec-v4
Meshtastic 92b6	Monalua	Oahu		Meshtastic ba05	Waipahu	Oahu	seed-wio-tracker-I1
Meshtastic a211	Nuuanu Valley	Oahu		Meshtastiv b0d0	Waipahu	Oahu	
JeffreyP	Olomana	Oahu	seed-wio-tracker-I1	Poi Dog 19f4	Waipahu	Oahu	heltec-mesh-node-t114
keolu kailua bmo	Olomana	Oahu	heltec-v3	Meshtastic 5ccc	Waipahu Uka	Oahu	
KevinB	Olomana	Oahu	seed-wio-tracker-I1	WH6ECG-00 Heeia	Windward Mall area	Oahu	heltec-v3
Linda	Olomana	Oahu	seed-wio-tracker-I1	AH6T_Mesh_dcc6		Oahu	t-echo
Meshtastic 215c	Olomana	Oahu		KH6EKD-1		Oahu	heltec-v3
Meshtastic d5a9	Olomana	Oahu		KH6ML-fox		Oahu	heltec-v3
Tim M	Olomana	Oahu	seed-wio-tracker-I1	Meshtastic ad18		Oahu	heltec-v3
WH7GG Wio	Olomana	Oahu	seed-wio-tracker-I1	NH7IT Robot		Oahu	heltec-v3
Meshtastic 436c_EML1	Pali	Oahu	sensecap-indicator	WH6ECG-15		Oahu	heltec-v3
Howzit	Palolo	Oahu	heltec-v3	WH6ECG-2		Oahu	heltec-v3
Meshtastic 6530	Palolo	Oahu	tlora-v2-1-1p6	WH6ECG-5		Oahu	heltec-v3
Meshtastic 8705	Palolo	Oahu	heltec_mesh_node_t114	WH6ECG-6		Oahu	heltec-v3
SOUTH 20 fbba	Palolo	Oahu	t-echo	WH6ECG-7		Oahu	t-deck
TD2 fbe0	Palolo	Oahu	t-deck	WH6ECG-9		Oahu	t-deck
302B Mobile	Pearl City	Oahu	heltec-v3	WH6FXV-Dash		Oahu	sensecap-indicator
Blinky	Pearl City	Oahu		101 Home Base		Oahu	heltec-v3
Palisades PEAR a130	Pearl City	Oahu	heltec-v3	101 mobile		Oahu	heltec-v3
Solar Alea	Pearl City	Oahu	seed-solar-node	39EC		Oahu	heltec-v3
CRN CGL	Pearl Harbor	Oahu	m5stack-c6i	4248 (mobile)		Oahu	t-deck
HiMesh Project - Aiea	Pearl Harbor	Oahu	station-g2	6C Hell-Kat		Oahu	heltec-v3
Loaf Mobile	Pearl Harbor	Oahu	rak4631	6C R1		Oahu	rak4631
Meshtastic 1a27	Pearl Harbor	Oahu	rak4631	6C T Deck		Oahu	t-deck
Meshtastic 259d	Pearl Harbor	Oahu		6C Wisblock		Oahu	rak4631
Meshtastic 3a1f	Pearl Harbor	Oahu	t-echo	6C_M1		Oahu	thinknode-m1
Meshtastic 412c	Pearl Harbor	Oahu	helyec-v3	6C_Pocket_Mesh 10k		Oahu	heltec-mesh-pocket
Meshtastic b78a	Pearl Harbor	Oahu	rak4631	6C_Pocket_Mesh_5K		Oahu	heltec-mesh-pocket
Meshtastic 8e34	Pearl Ridge	Oahu	heltec-vision-master-t190	6CP ESF2		Oahu	tracker-t1000-e
Meshtastic 2bcc	Pearlridge	Oahu	heltec-vision-master-t190	6Mlg Green Peak e206		Oahu	rak4631
KH6ML-mobile T-Echo2	Punchbowl	Oahu	t-echo	777 6e2b		Oahu	tracker-t1000-e
KaiserT114_23b0	Roosevelt High Makiki	Oahu	heltec-mesh-node-t114	7o N20 5c0b		Oahu	rak4631
Meshtastic 09b8	Roosevelt High Makiki	Oahu	heltec-v3	a5b8 Frankie		Oahu	heltec-v3



AAAA 6a36
 AB4YY-solar
 adam ant
 AG Home Station
 AH6WN RAK1
 AH6WN T-Deck
 Alex
 AlexMobileCL
 AlexShedCL
 All meshed up
 AO9C36
 Astra Hv3
 Atlavox C3 d0ab
 Atlavox Cape Coral
 Attick Shire
 AUXC HI
 AWiese1
 Backpack_jblack_m
 BanTheBot
 Battery
 BBBB 7cf8
 BCMP10K
 bDrifter_01 e023
 bDrifter_03 d368
 Bender 72c0
 Bird 6fa1
 bMesh 32c2
 bMeshtastic 637c
 bmo808-1
 Bombtastic
 BROVO 3
 BROVO 4
 BRT 88d5
 Bruh 45d0
 BXvln1
 CA-T1000-E-1
 cen cal
 CERT UoFN Repeater
 CERT-OL-04
 CERT-OL-B-Orchidland
 chaps
 Chee Hoo
 ChiggyPepi 01
 ChiggyPepi Mobile
 CMG Car
 Coconutwireless CW-A
 Coconutwireless CWM4

Coconutwireless CW-R
 CoconutWireless CW-S
 CoconutWireless3
 COM2-0d50
 COML HI d2f4
 comt-5d7c
 CP-Base
 Crypto5
 D19G
 DeepCleanSolar
 DeepCleanSolar.com
 deweys mesh
 Dominik
 drip drop
 drivec 4 - SF, UT
 Elab b14c
 elab-secsy 5bfc
 EMCOM ESF-2
 ENTM_Peacock
 ESF2M 739c
 F2G1
 Feds Watcher
 FPR.RWMP
 Frogstrap c5c5
 GeneBean Office 01
 GGGG 1fb0
 gogo
 GreenGuy
 GTZ2_6d5b
 HaoLe Norm
 Harbor Breeze 01
 Harbor Breeze 02
 HAVERLY01
 HBMC-R
 Helix-Heltec-V4
 HELL KAT V4
 HeritageLink
 Hethrael Tag
 icebear
 Inoculation
 Iron Giant
 IslandLocalMarket.com
 Jake 0907
 Jason WH6HFL
 JavaMeshHome
 Jays Node
 Jeffrey 89be



tracker-t1000-e
 rak4631
 t-deck
 rak4631
 rak4631
 t-deck
 heltec-v3
 xiao-nrf52-kit
 xiao-nrf52-kit
 heltec-v4
 tracker-t1000-e
 heltec-v3
 rak4631
 rak4631
 t-beam
 heltec-v3
 heltec_v3
 heltec_mesh_node_t114
 rak4631
 heltec-v3
 heltec-mesh-pocket
 heltec-v3
 heltec-mesh-mode-t114
 rak4631
 heltec-v3
 heltec-v3
 heltec-mesh-pocket
 rak4631
 heltec-v3
 t-deck
 sensecap-indicator
 heltec-v3
 heltec-v3
 tracker-t1000-e
 heltec-v3
 heltec-v3
 tracker-t1000-e
 heltec-v4
 seeed-solar-node
 tracker-t1000-e
 station-g2
 rak4631
 heltec-v3
 heltec-v4
 heltec-v4
 station-g2
 rak4631
 heltec-wireless-tracker

rak4631
 rak4631
 heltec-wireless-tracker
 t-deck
 heltec-v3
 tracker-t1000-e
 rak4631
 heltec-v3
 heltec-v3
 heltec-v4
 heltec-v4
 heltec-v3
 rak4631
 heltec-mesh-pocket
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v3
 t-deck
 heltec-v3
 tlora-v2-1-1p6
 t-deck-pro
 rak4631
 rak4631
 heltec-v3
 tracker-t1000-e
 t-deck
 heltec-v3
 rak4631
 rak4631
 rak4631
 heltec-v3
 rak4631
 heltec-v4
 heltec-v4
 heltec-wsl-v3
 wismesh-tag
 t-echo
 t-deck
 t-echo
 heltec-v4
 t-beam
 heltec-v4
 heltec-v3
 rak4631
 t-echo

Joey
 KSDCE Base
 KA4NQS f57c
 KaiMT
 Karah_WRXM997
 KERNY 3.0
 KF8FUU T-Deck
 KH6DK c800
 KH6EKD
 KH6ICU C-Roof 1 Hilo
 KH6ML Portable White Paper
 KH6UU 5dd4
 KH7EC-C
 KH7EH WXBOT
 KH7JF-1
 KH7TV Beam
 KI4eki-3
 KL7VE a3af
 KR-IT-RC
 Kulamalai MQTT Maui
 Lanikai looking @Kailua & Maui
 Little Brother 2
 LM - Turbotest
 LM-Rak
 LM-TactCon
 LM-UDPtest
 M-1
 MadgeAR02
 Magnetic 1b76
 Mama_Kat e770
 Maus ab9a
 Maxlinux Rok Trak
 Meashtastic b6b8
 Meashtastic Terminal
 Melissa WH6GXQ
 Merlin 350
 meshADV e990
 meshforge moc
 meshforge moc1
 Meshtastic 02ce
 Meshtastic 02f4
 Meshtastic 03ac
 Meshtastic 04c6
 Meshtastic 04e0
 Meshtastic 0506
 Meshtastic 059d
 Meshtastic 0660

Meshtastic 06cc
 Meshtastic 0716
 Meshtastic 078a
 Meshtastic 0892
 Meshtastic 09f4
 Meshtastic 0c20
 Meshtastic 0c70
 Meshtastic 1476
 Meshtastic 147a
 Meshtastic 1598
 Meshtastic 15dc
 Meshtastic 16a2
 Meshtastic 16c3
 Meshtastic 197c
 Meshtastic 19a4
 Meshtastic 1d94
 Meshtastic 2004
 Meshtastic 2026
 Meshtastic 21e4
 Meshtastic 21fc
 Meshtastic 244c
 Meshtastic 24e5
 Meshtastic 2528
 Meshtastic 25e0
 Meshtastic 25f0
 Meshtastic 276a
 Meshtastic 2771
 Meshtastic 27c5
 Meshtastic 2849
 Meshtastic 298c
 Meshtastic 2ac1
 Meshtastic 2b24
 Meshtastic 2d83
 Meshtastic 2f90
 Meshtastic 30bc
 Meshtastic 3163
 Meshtastic 3261
 Meshtastic 3528
 Meshtastic 36b1
 Meshtastic 36f9
 Meshtastic 36f9
 Meshtastic 3747
 Meshtastic 399a
 Meshtastic 399a
 Meshtastic 3bee
 Meshtastic 3e68
 Meshtastic 3f34



heltec-v4
 heltec-v3
 heltec-v3
 heltec-v3
 tracker-t1000-e
 lilygo-tbeam-s3-core
 t-deck
 heltec-v3
 heltec-v3
 rak4631
 heltec-wireless-paper
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v4
 lilygo-tbeam-s3-core
 Heltec-wireless-tracker
 rak4631
 tracker-t1000-e
 station-g2
 rak4631
 tracker-t1000-e
 xiao-nrf52-kit
 rak4631
 sensecap-indicator
 station-g2
 rak4631
 t-deck
 rak4631
 heltec-v3
 tracker-t1000-e
 rak4631
 rak4631
 seeed-wio-tracker-11
 t-deck
 portduino
 portduino
 portduino
 heltec_mesh_node_t114
 t-deck
 heltec-mesh-mode-t114
 tracker-t1000-e
 rak4631

tracker-t1000-e
 t-lora-pager
 rak4631
 heltec_mesh_pocket
 heltec-v3
 rak4631
 heltec-v3
 t-echo
 heltec-mesh-node-t114
 station-g2
 rak4631
 rak4631
 rak4631
 t-echo
 rak4631
 tlora-v2-1-1p6
 tracker-t1000-e
 heltec_v4
 heltec-mesh-pocket
 rak4631
 t-echo
 rak4631
 rak4631

Meshtastic 3f68
 Meshtastic 3f98
 Meshtastic 4398
 Meshtastic 4533
 Meshtastic 4ac0
 Meshtastic 4b1d
 Meshtastic 4cb3
 Meshtastic 4d45
 Meshtastic 4f2b
 Meshtastic 5073
 Meshtastic 515c
 Meshtastic 52dc
 Meshtastic 556c
 Meshtastic 5890
 Meshtastic 5af8
 Meshtastic 5cfc
 Meshtastic 5dd6
 Meshtastic 6190
 Meshtastic 61d4
 Meshtastic 6200
 Meshtastic 63cd
 Meshtastic 6615
 Meshtastic 6670
 Meshtastic 67b0
 Meshtastic 6814
 Meshtastic 696e
 Meshtastic 6a04
 Meshtastic 6a2c
 Meshtastic 6b4a
 Meshtastic 6cd2
 Meshtastic 6d44
 Meshtastic 6dbd
 Meshtastic 6ddc
 Meshtastic 6e34
 Meshtastic 7060
 Meshtastic 7280
 Meshtastic 72fc
 Meshtastic 74b0
 Meshtastic 78a3
 Meshtastic 7a47
 Meshtastic 7a90
 Meshtastic 7afc
 Meshtastic 7b94
 Meshtastic 7bd8
 Meshtastic 7c78
 Meshtastic 7d14
 Meshtastic 7fc4



Meshtastic 8148
 Meshtastic 82ec
 Meshtastic 83ed
 Meshtastic 83f4
 Meshtastic 8740
 Meshtastic 87d5
 Meshtastic 8824
 Meshtastic 8cb8
 Meshtastic 8f3c
 Meshtastic 8f7c
 Meshtastic 8fd1
 Meshtastic 905c
 Meshtastic 90dc
 Meshtastic 92c4
 Meshtastic 9440
 Meshtastic 9468
 Meshtastic 94b8
 Meshtastic 9650
 Meshtastic 968b
 Meshtastic 97a7
 Meshtastic 9940
 Meshtastic 9b45
 Meshtastic a096
 Meshtastic a0aa
 Meshtastic a304
 Meshtastic a3fc
 Meshtastic a42f4
 Meshtastic a4b8
 Meshtastic a5dc
 Meshtastic a7f2
 Meshtastic a894
 Meshtastic a8ca
 Meshtastic a978
 Meshtastic a980
 Meshtastic aa80
 Meshtastic abcb
 Meshtastic ad48
 Meshtastic ade8
 Meshtastic aec7
 Meshtastic b468
 Meshtastic b58c
 Meshtastic b6fd
 Meshtastic b7dc
 Meshtastic b8ac
 Meshtastic b9c9
 Meshtastic b9f9
 Meshtastic ba68



rak4631
 t-deck

 rak4631
 rak4631
 heltec-v3
 heltec-v3
 heltec-v3

 rak4631
 heltec-v4
 rak4631
 tracker-t1000-e

 rak4631
 t-beam
 heltec-v3

 tracker-t1000-e

 rak4631
 t-beam
 heltec-v3
 tlora-v2-1-1p6
 rak4631

 heltec-v3
 t-echo
 rak4631

 heltec-v3
 heltec-v3
 heltec-v3

 heltec-v3

 heltec-v3
 tracker-t1000-e

 heltec-v3
 heltec-v3
 heltec-v3

 heltec-v3
 rak4631

 heltec-v3
 heltec-v3

 heltec-v3
 tracker-t1000-e
 tracker-t1000-e
 heltec-v3

Meshtastic bac7
 Meshtastic be24
 Meshtastic be90
 Meshtastic bee4
 Meshtastic c008
 Meshtastic c0f0
 Meshtastic c20c
 Meshtastic c76c
 Meshtastic c904
 Meshtastic ccd4
 Meshtastic cd50
 Meshtastic ce9e
 Meshtastic d0be
 Meshtastic d145
 Meshtastic d403
 Meshtastic d514
 Meshtastic d518
 Meshtastic d65e
 Meshtastic d904
 Meshtastic d958
 Meshtastic da70
 Meshtastic da82
 Meshtastic db70
 Meshtastic dd28
 Meshtastic defc
 Meshtastic dfe8
 Meshtastic djh1
 Meshtastic donphillipm
 Meshtastic e110
 Meshtastic e128 (mobile)
 Meshtastic e145
 Meshtastic e4d4
 Meshtastic e980
 Meshtastic e9f0
 Meshtastic ebe4
 Meshtastic ed00
 Meshtastic ee90
 Meshtastic eed7
 Meshtastic ef88
 Meshtastic f028
 Meshtastic f310
 Meshtastic f59e
 Meshtastic f6b4
 Meshtastic f7b8
 Meshtastic f7c4
 Meshtastic f830
 Meshtastic f8d0

Meshtastic f8f0
 Meshtastic f934
 Meshtastic f954
 Meshtastic fb9c
 Meshtastic fbaf
 Meshtastic fc73
 Meshtastic fe05
 Meshtastic fe54
 Meshtastic f0d0
 Millie dc60
 MiMesh
 MiMobile
 MkkB
 mkkD
 mkkP
 mkkT
 MLCS-2
 MLE_752c
 MLE_Net ce65
 MLE_Net_e66f
 Mobile fda0
 Mobid T1000-E
 Monkey 8044
 monlab heltec v3 68ac
 msunset
 MT3
 Muzi-R1-Rover
 NEEZ
 Neshtastic a078
 Nibbler 8de4
 Nmeshtastic 33a4
 Node Collector EDC Muzi
 NorthRWest 2
 NorthRWest Base
 Norwood-Online
 ORCA Hapuna
 ORCA T1000e
 ORCA Tdeck Plus (mobile)
 ORCA Westside
 Orcatdeck
 PatchrZero.Prime
 Patroit f6d4
 Patti
 Pher Mobile
 Pi30db-echo 77dd
 pi3-30db-echo
 pi3a-cd98

Meshtastic

A LILYGO TTGO T-Beam running in client mode on battery power.

International standard Based on LoRa, Bluetooth, Wi-Fi

Compatible hardware Supports ESP32, nRF52840 and others

Physical range Typically 2-5 km (1.2-3.1 mi), upwards of 100 km (62 mi) possible via mesh

Website meshtastic.org

heltec-v3
 heltec-v3
 heltec-v4
 heltec-v3

 heltec-wireless-tracker
 heltec-v3
 portduino
 rak4631
 heltec-v3

 heltec_mesh_node_t114
 tracker-t1000-e
 heltec-v3

 heltec-v3

 t-deck

 heltec-v3
 heltec-v3
 heltec-v3

 heltec-v3
 t-deck

 t-deck
 tracker-t1000-e

 rak4631

 portduino
 t-deck
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v3

 heltec-v3

 xiao-nrf52-kit

 rak4631
 heltec-v3
 heltec-v3
 muzi_r1_neo
 t-beam
 lilygo-tbeam-s3-core
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v3
 station-g2
 rak4631
 rak4631
 heltec-v4
 tracker-t1000-e
 rak4631
 heltec-v3
 t-deck
 tlora-v2-1-1p6
 muzi_r1_neo
 heltec-v3
 heltec-v3
 heltec-v3
 heltec-v3
 rak4631

 heltec-v3
 heltec-v3
 rak4631
 tracker-t1000-e
 t-deck
 rak4631
 t-deck
 heltec-wsl-v3
 heltec-v3
 rak4631
 tracker-t1000-e
 portduino
 portduino
 portduino

pi4-meshcore
 PIS-waveshare bfc2
 pi-zeroW-delta
 Plantation Harbor 6da3
 Plantation Harbor eed6
 PoiDog_fa98
 Pualani Pocket
 RAK 1W cba1
 RAK sensor test ebb9
 RAK Solar KOKO
 RAK Solar sensor gamma
 Richard A Mobile 1
 Rook Pro
 Rookery CAW1
 ROSTASTIC_01
 Scooby Doo
 Sen1
 SenseCap_02
 SKW1
 Small Kine Lolo Papolo
 SOLAR 20-0b3d
 solar bloc 3250
 solar block
 solar c955
 Solar DannyK
 Solar Oscar
 Solar Snake 01
 SolarBaker
 SOTU
 south point scc 16dd
 Station G2
 Station G2 a198
 Stix
 Sugoi Mesh R1
 Sukebe mobile
 Sunflower I (sj mesh)
 SunMesh 915a
 T_Beam_S_986c
 Taylor
 T-Beam Beta
 T-Beam Gamma
 t-beam S3 49e8
 Tbeam-S3-9e34
 Tbird TT01
 tdeck forrestk3
 T-Echo a912
 T-Echo c7a3



portduino
 portduino
 portduino
 heltec_mesh_node_t114
 heltec_mesh_node_t114
 heltec-wireless-tracker-v2
 tracker-t1000-e
 rak4631
 rak4631
 rak4631
 rak4631
 rak4631

t-echo
 t-deck
 heltec-v3
 tracker-t1000-e
 tracker-t1000-e
 heltec-v3
 tracker-t1000-e
 rak4631
 heltec-v4
 rak4631
 rak4631
 rak4631
 rak4631
 rak4631
 heltec-mesh-mode-t114
 rak4631
 rak4631
 station-g2
 station-g2
 tracker-t1000-e
 rak4631
 heltec-v3
 rak4631
 heltec-v3
 lilygo-tbeam-s3-core
 t-deck
 t-beam
 t-beam
 t-beam
 lilygo-tbeam-s3-core
 heltec-v3
 t-deck
 t-echo
 t-echo

Meshtastic Infrastructure

Meshtastic infrastructure is built on the foundation of decentralized, off-grid communication using LoRa technology. It enables low-power, long-range communication over ISM radio bands, making it suitable for various applications, including IoT projects and emergency response. The project is community-driven, with a strong DIY ethos, and has found applications in remote areas, natural disasters, and areas with internet censorship. Meshtastic's optional location-tracking capabilities allow for monitoring community members without relying on data-intensive commercial applications.

[Meshtastic](#)

The infrastructure is composed of clusters of nodes communicating locally with each other and expanding as clusters become visible to one another. Without linking infrastructure, connecting from one cluster to another is not possible, but some MQTT relay features exist. The use and development of the network require very few resources, as simple DIY nodes based on widely available devkits are sufficient.

[Wikipedia](#)



Tiny Solar (Williams Crossroads)
 TK_Heltec_V3
 Tom Green
 TRE1 9502
 tuti
 Uconsole
 VERT Deputy Planning Chief
 VERT Fire Dept Liaison
 VERT Medical Unit Lead
 VERT-01
 Vagon Poetry
 Wah_Phku_1
 Warbird Pocket
 WB7N Mobile
 wecan 6508
 wecan 90a4
 WH6ECG-16 Heeia
 WH6ECG-34 Heeia
 WH6ECG-37 Heeia
 WH6FIX 1
 WH6FXV-0
 WH6FXV-1 000c
 WH6GEJ RAK2
 wh6gxz-ube
 WH6KB Mobile
 WH6OMG solar 1
 WH6OMG Solar 2
 WH7PD
 WhateverFish
 Whisper Node 3
 Wiseblock 6c2c
 WS85
 WYK7 TC2-BBS-Mesh CMD B
 X Solar
 X Tdeck
 zhu 5e08



xiao-nrf52-kit
 heltec-v3
 heltec-v4
 rak4631
 t-deck
 portduino
 tracker-t1000-e
 tracker-t1000-e
 tracker-t1000-e
 tracker-t1000-e
 heltec-v3
 heltec-v3
 rak4631
 rak4631
 heltec-v3
 heltec-v3
 heltec-nesh-node-t114
 heltec_mesh_node_t114
 heltec_mesh_mode_t114
 heltec-v3
 heltec-v3
 rak4631
 portduino
 rak4631
 rak4631
 rak4631
 heltec-v3
 rak4631
 heltec-v3
 rak4631
 rak4631
 heltec-v3
 rak4631
 t-deck
 heltec-v3

New rule for all licensed amateur radio operators:

Let FCC know within 10 days of any change in personal contact info

ARRL reports that the Federal Communications Commission (FCC) has adopted changes to its rules to require that every holder of an FCC Registration Number (FRN) update their contact information in the CORES system (email and postal addresses) within ten business days of a change.

Because every FCC licensee—including amateur radio operators—must have an FRN to file applications, this requirement applies to all licensed amateurs. FRN contact information is handled separately and apart from contact information related to a licensee in the License Manager System. Both records must be kept up-to-date, and each requires a separate update.

Until now, no specific deadline existed for updating FRN or licensee contact information. Instead, the amateur rules at sections 97.21 and 97.23 provide that a license may be suspended or revoked "if FCC correspondence is returned as undeliverable because of an incorrect address or email." These provisions remain in effect as well as the 10-day deadline applicable to FRN information.

If your FRN information is current and has

not changed, no immediate action is required, but you must adhere to the 10-day rule for future changes. It is recommended to periodically check

both the CORES and License Manager Systems to ensure contact information is accurate, even if no changes have occurred.

The new deadline (section 1.8002(b)(2) of the Commission's Rules) became effective on February 5 as part of a proceeding that was limited to further constraining robocalls. Although the proceeding focused on robocall issues, the 10-day update requirement applies broadly to all FRN holders.

On February 6 the FCC confirmed in a Public Notice that the new deadline applies to all FRN holders. The amendment replaces language adopted in 2001 that required FRN

holders to keep their contact information up-to-date but had not imposed a deadline for doing so.

Numerous requests for clarification from non-robocall interests led the FCC to issue a Public Notice on February 6 (see also PDF) clarifying that fines imposed on those subject to the robocall rules for not keeping contact information up-to-date do NOT apply to licensees such as radio amateurs, but that the 10-day deadline does apply to all FRN holders.

See the following resources for updating FRN and licensee information.

FCC Tutorial on updating FRN information: https://apps.fcc.gov/cors/html/Update_FRN_information.htm

ARRL information on how to update licensee information: <https://www.arrl.org/call-sign-ren-ews-or-changes>

For assistance, call the FCC FRN Help Desk: (877) 430-3201 (available 8 AM to 6 PM ET)